BIOCOSMOLOGY – NEO-ARISTOTELISM

Abbreviated key title: ***Biocosmol. – neo-Aristot.***

Parallel title: ***Биокосмология – нео-Аристотелизм***

Bilingual Electronic Journal
for Universalizing Scientific and Philosophical Research
based upon the Original Aristotelian Cosmological Organicism

ISSN: 2225-1820

Volume 8, Numbers 3&4, Summer/Autumn 2018

Official organ of the Biocosmological Association – http://en.biocosmology.ru/

Place and time of origination:
At the **Novgorod State University named after Yaroslav-the-Wise,**
Veliky Novgorod, Russia;
On the July 24th, 2010

EDITORS

***Editor*:**
– Konstantin S. KHROUTSKI (Veliky Novgorod, Russia)

Advisory Editors:
– Anna MAKOLKIN (Toronto, Canada)
– Georges CHAPOUTHIER (Paris, France)
– Igor A. LANTSEV (Veliky Novgorod, Russia)
– Paul BEAULIEU (Montreal, Canada)

***Managing Editor*:**
– Petr GUDZ (Veliky Novgorod, Russia)

***Book Review Editor*:**
– Runhu LI (Beijing, China)
– Jing GUO (Beijing, China

***Associate Editor*:**
– Natalia FEDOROVA (Veliky Novgorod, Russia)

A peer reviewed journal
Published by the *Biocosmological Association*, Since December 2010, 4 times a year
Texts of the articles are available in the rubric – "Issues of the Journal"
Журнал зарегистрирован Федеральной службой по надзору в сфере связи, информационных технологий и массовых коммуникаций (Роскомнадзор) – Свидетельство о регистрации СМИ – Эл № ФС77-43048 от 15.12.2010.

Editorial Board

Biocosmology of physics and mathematics — **Igor A. LANTSEV** : Dr. Phys.-Math. Sci., Professor, Department of theoretical and mathematical physics at the Novgorod State University after Yaroslav-the-Wise, Veliky Novgorod;

Bioecology — **Nicolay N. MAXIMYUK** : Doctor of Agriculture Sciences, Professor, Head of the Department of Biology and Biological Chemistry at the Novgorod State University after Yaroslav-the-Wise, Honored science worker, full member (academician) of the International Academy of Ecology and Life Protection (AELPS), academician of the Russian Academy of Natural Sciences, corresponding member of the Russian Academy of Natural Sciences (RANS); Veliky Novgorod;

Bioethics — **Hans-Martin SASS** : Professor, Ph.D., Senior Research Scholar at the Kennedy Institute of Ethics, Georgetown University, Washington DC 20057, USA; and at the Zentrum fuer Medizinische Ethik Ruhr Universitaet NABF 04/297 D-44780 Bochum, Germany;

Biology — **Georges CHAPOUTHIER** : Professor, PhD, Emeritus Director of Research at the French CNRS (National Centre for Scientific Research), Paris, France;

Civilizational theory and Heritage of P.A. Sorokin — **Vladimir N. ALALYKIN-IZVEKOV** : Ph.D., Representative and Programs Coordinator (Europe, Russia) of the International Society for the Comparative Studies of Civilizations (ISCSC); Member, ISCSC Board of Directors; ProRector, International University for the Societal Development; Washington, D.C., U.S.A.;

Classical ancient philosophy — **Camilo VEGA GONZALES** : Ph.D., Professor, Institute of Philosophy, University of Antioquia, Medellin, Colombia;

Contemporary issues of the Chinese philosophy of mind and studies in the field of philosophy of praxis, engineering and technology — **Xiuhua ZHANG** : Ph.D., Professor, School of Marxism, China University of Political Science and Law, Beijing, China;

Comparative philosophy — **Kiyokazu NAKATOMI** : academic at the Chiba Kujukuri Prefectural High School, 1910 Katakai Kujukuri Machi Chiba Prefecture, Japan;

Complex sciences — **Cristian SUTEANU** : Ph.D., Associate Professor in the Department of Geography and Environmental Studies, and in the Department of Environmental Science; Chairperson of the Department of Environmental Science; Saint Mary's University, Halifax, Nova Scotia, Canada;

Cross-cultural medicine — **Karl W. KRATKY** : Professor, Ph.D., University of Vienna, Faculty of Physics, Boltzmanngasse 5, A-1090 Vienna, Austria;

Ecological issues of Health — **Walter KOFLER** : Professor, M.D., President of International Academy of Sciences – Health and Ecology, Innsbruck, Austria;

Economy — **Alexander I. ORLOV** : DSc (economics), DSc (technics), PhD (mathematics), full professor of Department «Industrial Economy and Management» of the Bauman Moscow State Technical University, full professor of Department «Estimation of efficiency of investment projects» of the Moscow physicotechnical institute, the academician of the International academy of researches of the future and the Russian academy of statistical methods, Moscow;

Genetics and biophysics — **Boris F. CHADOV** : Doctor of biological sciences, Professor, Academician of the Russian Academy of Natural Sciences, Institute of Cytology and Genetics, The Siberian Division of the Russian Academy of Sciences, Novosibirsk;

Health management and policy — **Stephen MODELL** : Dr., M.D., M.S., Dissemination Director of the Center for Public Health and Community Genomics; University of Michigan; Ann Arbor, MI, U.S.A.;

Immunology — **Georgiy S. ARKHIPOV** : Professor, Doctor of medical sciences, Novgorod State University after Yaroslav-the-Wise, Veliky Novgorod;

Human life and Biocosmology — **Rudolf KLIMEK** : Professor, M.D., PhD, Dr h.c.multi, LFWLA – World Information University, Krakow, Poland;

Informatics-cybernetic modeling — **Sergey N. GRINCHENKO**: Professor, Doctor of technical sciences, Leading researcher at the Institute of Informatics Problems of the Russian Academy of Sciences, Moscow;

Integrative medicine — **Peter HEUSSER** : Professor, MD MME, Head, Center for Integrative Medicine, Gerhard Kienle Chair for Theory of Medicine, Integrative and Anthroposophic Medicine, Witten/Herdecke University, Germany;

Medicine and Society — **Anatoliy V. KARPOV** : Professor, Doctor of medical sciences, Novgorod State University after Yaroslav-the-Wise, Veliky Novgorod;

Methodology of science and philosophy — **Ana BAZAC** : Professor, Ph.D., Polytechnic University of Bucharest, vice-president of the Division of Logic, Methodology and Philosophy of Science, Romanian Committee of History and Philosophy of Science and Technology, Romanian Academy; Bucharest, Romania;

Mind Science (integration in the specific form of mind philosophy, cultural psychology, cognitive science, artificial intelligence, pedagogy, etc.) — **Kwon Jong YOO** : Professor, Ph. D., Chung-ang University, Seoul, Korea;

Naturalist logic — **Milan TASIĆ** : Professor, Ph. D., University of Niš, Serbia;

Organization sciences — **Paul BEAULIEU** : Ph.D., Professor, School of Management Sciences, University of Quebec in Montreal, Montreal, Canada;

Philosophy of science — **Albert N. KOCHERGIN** : doctor of philosophical sciences, Professor at the philosophical sub-faculty of the University of retraining and qualification's rise for lecturers of the social sciences and humanities attached to the Lomonosov Moscow State University, academician of the Russian Academy of Humanities, of the Russian Ecological Academy, of the Academy of Geopolitical Problems, of the International Academy attached to the UN, Moscow;

Physics — **Leonardo CHIATTI** : Dr., Ph.D., Head of Medical Physics Laboratory, Health Local Authority, Viterbo, Italy;

Sciences and Humanities — **Xiaoting LIU** : Professor, Ph.D., College of Philosophy and Sociology, Beijing Normal University, Beijing, China;

Semiotics/Cultural history — **Anna MAKOLKIN** : Professor, Ph.D., The Frank Iacobucci Centre for Italian Canadian Studies, University of Toronto, Toronto, Canada;

Theory and practice of the whole individual — **Alexander A. SOMKIN**: Ph.D., Professor at the Ogarev Mordovia State University, Saransk.

CONTENTS *(СОДЕРЖАНИЕ)*

EDITORIAL (РЕДАКТОРСКАЯ СТАТЬЯ)……..…….…….....…..… 364

ARTICLES (*НАУЧНЫЕ СТАТЬИ*)

Xiaoting Liu … …….……... 367
• On deep-seated organic property of universe

Rudolf Klimek.……..……..…….…..…… 380
• Cancer and the Organicist laws of Nature

Ana Bazac……..…..……..…… 391
• What is natural and what is non-natural in cancer?

Georges Chapouthier…….…….…….……... 421
• Aristotelian entelechy and modern biology

Walter Kofler……..… 431
• The increasing inhomogeneity of the power of science and an "Aristotelian" proposal to cope with

Dariusz Jasiczek & Marek Klimek..…… 449
• The fortieth anniversary of thermodynamic oncology

Владимир Н. Алалыкин-Извеков..…….……..…… 461
• Историософия П.А. Сорокина как часть его интегральной парадигмы научного изучения структуры и эволюции общества, культуры и личности

ESSAYS (*ЭССЕ*)

Paulo Nuno Martins…..……..…… 476
• The contribution of Aristotle´s thought to the history of medicine: an essay

Runhu Li……..…..……..……... 482
• Approaches to Traditional Chinese Medicine and Stepping into the Future – In a Biocosmological View

SCIENTIFIC LIFE (*НАУЧНАЯ ЖИЗНЬ*)

Book of Abstracts, of the Scientific forum held in Veliky Novgorod, on October 12–14, 2018 491
(Книга тезисов Научной конференции, НовГУ, Великий Новгород, 12–14 октября 2018)

CRITICISM AND BIBLIOGRAPHY

Arthur Saniotis……..…….…… 565
• The Integrated Cosmos – Review of Georges Chapouthier's "The Mosaic Theory of Natural Complexity (A scientific and philosophical approach)" – 1 Éditions des maisons des sciences de l'homme associées, France, 2018.

CONTRIBUTORS (*АВТОРЫ*)…….……..……..... 572
Notes for Contributors (*Правила для авторов*)……... 573

Editorial

The World Congress "Cancer and Biocosmology", held in Krakow (July 2017) has given a considerable impetus to the evolvement of Integralist studies that are the main scope of activities held by the Biocosmological Association. One of its great successes had been the launching of the World Information University (WIU) – the brilliant brainchild and outstanding achievement of Prof. Rudolf Klimek (and who is currently the WIU President) and his scholarly milieu. Now, witnessing the WIU successful evolvement – we are delighted to participate and contribute to the consistent growth and maturation of this essential institute of science, including the possibilities of the BCnA-journal. Noteworthy, in the Summer/Autumn Issue of the BCnA-Volume 8 – we present the new Rudolf Klimek's work, entitled as "Cancer and the Organicist laws of nature". Even more remarkable is that Klimek's realism intercrosses with the academic views of another active participant of the invariably interesting debates during the Krakow's Congress – Ana Bazac, who is now the author of the awaited (on the topic of her Krakow's report) article on the topic: "What is natural and what is non-natural in cancer?" Moreover, one of the central topics of A.Bazac's work is the study of the questions of teleological physics and its significance for modern science. The same subject-matter constitutes the main content of the article by Georges Chapouthier, which title is "Aristotelian entelechy and modern biology". The main line of this important study is the analytical correlation with the brilliant exploration of an American biologist William Emerson Ritter, which results were published in the article: "Why Aristotle invented the word *Entelecheia*," published in *The Quarterly Review of Biology*, 7(4), pp. 377–404, in 1932.

In the same (Organicist) vein, the scholar from China – Liu Xiaoting, President of the Biocosmological Association, who likewise substantively contributed as to Krakow's Congress and its heated disputations, as to the following meetings in Kathmandu (16ISBC), Beijing (17ISBC) and Veliky Novgorod (18ISBC) – he now presents the article, entitled "On deep-seated organic property of universe", wherein a profound scholarly search for the Organicist and Integralist bases of our actual world (Universe) is realized. Xiaoting Liu's article opens the Issue.

Two more substantive contributions were realized in Krakow, and now is the time to publish their results in this Issue, in the form of scholarly articles; and essentially noting that they represent the implementation of their multi-year innovation scientific plans. It is noteworthy that six years ago, in the year 2012 (BCnA Vol.2, No.4, Autumn 2012), the Issue was opened by the article of Walter Kofler (who is President of the International Academy of Science – Health & Ecology), wherein the scholar proposed an innovation methodological approach – the "Extended View" conception. That work was named as Part 1 of the "Epistemological and ontological tools for an Extended View of a human person as a social being and its environments". Moreover, we are pleased, now, to announce the publication of the Part II of his general study, entitled as "The increasing inhomogeneity of the power of science and an «Aristotelian» proposal to cope with". The authors of the second promising strategy for development (and which already is

the effective practical method) – Dariusz Jasiczek and Marek Klimek – they present in the Issue the article entitled "The fortieth anniversary of thermodynamic oncology".

Russian-language publications of the Issue are presented by the article of Vladimir N. Alalykin-Izvekov, entitled as "Historiosophy of P.A. Sorokin as part of his integral paradigm for scientific study of structure and evolution of society, culture, and personality". Each investigation of Pitirim Sorokin's scientific heritage (i.e. of a genuine Organicist and Integralist scholar) is important for the BCA evolvement. In the same vein, of the Organicist and Integralist perspective – one would find many interesting things in the materials of the recent scholarly meeting in Veliky Novgorod, which are featured in the Book of Abstracts that is placed in the section "Scientific life".

In turn, in the Essays section, two works are released: the essay of Paulo Nuno Martins, under the title "The contribution of Aristotle´s thought to the history of medicine: an essay"; and the work of Li Runhu, which is entitled "Approaches to Traditional Chinese Medicine and Stepping into the Future – In a Biocosmological View". Finally, in the section "Criticism and bibliography" – Arthur Saniotis presents the review of Georges Chapouthier's book: "The Mosaic Theory of Natural Complexity (A scientific and philosophical approach) – 1 Éditions des maisons des sciences de l'homme associées, France, 2018". The scholar headlines his reviewing as "The Integrated Cosmos".

December 21, 2018

Konstantin S. Khroutski, Editor

Редакторская

Всемирный конгресс «Рак и Биокосмология», проведенный в Кракове (в июле 2017 года) дал значительный импульс к развитию Интегралистских исследований, что является основной сферой деятельности для Биокосмологической ассоциации. Одним из наиболее значимых достижений данного форума стало создание Всемирного Информационного Университета (ВИУ) – блистательного детища и выдающегося достижения профессора Рудольфа Климека (и который в настоящее время является президентом ВИУ) и его научного окружения. Теперь, ввиду успешного развития ВИУ – мы рады участвовать и вносить свой вклад в последовательный рост и развитие этого важнейшего научного института, включая и возможности BCnA-журнала. Примечательно, поэтому, что в летнем/осеннем выпуске BCnA (его 8-го тома) мы представляем новую работу Рудольфа Климека под названием «Рак и органические законы природы». Еще более примечательным здесь является, что реализм Климека взаимно пересекается с академическими взглядами другого активного участника неизменно интересных дебатов во время Краковского Конгресса – Анны Базак, которая в данном Выпуске представляет давно ожидаемую (по теме ее доклада в Кракове) статью, с названием: «Что является естественным, а что неестественным при раке?» Тем

более, что одной из центральных тем работы у Базак является изучение вопросов телеологической физики и ее значения для современной науки. Этот же предмет составляет основное содержание статьи Жоржа Чапоутье, озаглавленной как «Аристотелевская энтелехия и современная биология». Основная линия этого важного исследования представлена аналитическим соотнесением его предмета с блестящим исследованием американского биолога Уильяма Эмерсона Риттера, результаты которого были опубликованы в статье: «Почему Аристотель изобрел слово *Энтелехия*», опубликованной в *The Quarterly Review Биология*, 7 (4), с. 377–404, в 1932 году.

В этом же (Органицистском) русле ученый из Китая – Лю Сяотин, Президент Биокосмологической ассоциации, и кто также внес существенный вклад в работу Конгресса в Кракове, и его горячие дискуссии, как и в последующие встречи в Катманду (16ISBC), Пекине (17ISBC), и Великом Новгороде (18ISBC) – сейчас он представляет в данном Выпуске статью, с названием «Об органической, глубоко укоренившейся и характерной особенности вселенной», где осуществляется глубокий научный поиск основ Органицизма и Интегрализма, в отношении к нашему реальному миру (Вселенной). Статья Сяотина Лю открывает Выпуск.

Еще два существенных вклада были реализованы в Кракове, и сейчас настало время опубликовать их результаты в данном Выпуске, в форме научных статей; и необходимо отметить, что они представляют собой реализацию авторских многолетних инновационных научных планов. Примечательно, что еще шесть лет назад, в 2012 году, BCnA-Выпуск (Vol.2, No.4, Autumn 2012) открывала статья Вальтера Кофлера (кто является президентом Международной академии наук – Здоровье и экология), где ученый раскрыл свой инновационный методологический подход – концепцию «Расширенного взгляда». Эта работа была именована как Первая часть «Гносеологических и онтологических инструментов для расширенного взгляда на человека как социальное существо и его среду». Тем более мы сейчас рады объявить о публикации второй части его общего исследования, озаглавленной как «Возрастающая неоднородность власти науки и «Аристотелевское» предложение как справиться с этим». Авторы второй перспективной стратегии развития (и уже эффективного метода) – Дариуш Ясичек и Марек Климек – они представляют в Выпуске свою статью «К сорокалетию термодинамической онкологии».

В свою очередь, в разделе «Эссе» публикуются две работы: эссе Пауло Нуно Мартинса под названием «Вклад Аристотелевской философской системы в историю развития медицины: эссе»; и работа Жуньху Ли, озаглавленная как «Подходы к Традиционной Китайской медицине и вступление в будущее – в свете Биокосмологии». Наконец, в разделе «Критика и библиография» – Артур Саниотис представляет обзор книги Жоржа Чапоутье, «Мозаичная теория естественной сложности» (Научно-философский подход) – 1 Éditions des maisons des sciences de l'homme associées, Франция, 2018». Ученый озаглавил свою рецензию как «Интегрированный космос».

21 декабря 2018 г.

К.С. Хруцкий, Редактор

ON DEEP-SEATED ORGANIC PROPERTY OF UNIVERSE

Xiaoting LIU[1]

ОБ ОРГАНИЧЕСКОЙ, ГЛУБОКО УКОРЕНИВШЕЙСЯ И ХАРАКТЕРНОЙ ОСОБЕННОСТИ ВСЕЛЕННОЙ

Сяотин ЛЮ

Abstract. People often say that the organic nature mainly refers to the relationship between specific beings, that is, the relationship between one thing and another. This type of organic property is actually horizontal, and cannot explain its origin. There are three prevalent ways of argument in history. The first is the argument of Fideism, represented by the most influential Christian religion. It is believed that this organic property comes from God's endowment, because God created this world. The second way is natural philosophy based on the Greek tradition. It is believed that the word "nature", in Aristotle, originally had two-layered meaning of spontaneous "essentiality" and tangible substance or natural world. Unfortunately, later generations remembered only the second one. The third way is the argument of idealism, taking Hegel as a typical representative. He insists on the idea that logic is "priori", and regards things and nexus in nature as the link or "result" of absolute idea's deduction. Today, these three arguments are almost the same on their basic form or method; they take the organic property of the natural world to be expressional and to be of the second order. However, the problem is how the "basic" things can be organic and how their organic property can be transmitted? For this reason, each of them strives to show its own organic property, that is, nature originally has an organic meaning, the omniscient and omnipotent God is of course organic, and logic must also be organic. So, how can be this organic property transmitted? The first holds that two natures are inherently one; the second proposes universalism, namely pantheism, which considers God to be in everything; and the third, through phenomenological approaches, argues that all things being discussed are conscious. Within it, it is "*a priori*" organic. In order to bridge the connection between noumenon and phenomenon, Heidegger pointed out that nature, being, and logos are essentially one thing in the basic sense. They share the same origin with different names, and nature, in Greek, also has the property of spontaneous spring-up and emergence of the self-evolving thing. It is thus possible to break through the "ontological difference" between beings and being. Heidegger also pointed out that thinking is not theory but path; and path is no other than truth, according to Parmenides' identity principle of thinking and being. Therefore, human of Da-sein who is living as a cosmic existence must learn to think with being and be responsible for being. Biocosmology means that the universe is fundamentally Organicist and non-Dualist, but Dynamic, Bipolar and Triadic (and Triadological). This is a profound return to Aristotle's philosophical tradition – a new movement back to the past, but, thereby, due to a natural Dynamic Cyclic Ascending evolvement – to the Naturalist (of wellbeing) Future.

Keywords: Nature, the Nature World, Organicity, Bio-ontology, ontology-organism, Bio-theory of Guarantee, Bio-theory of Truth, Bio-Cosmology, Pantheism.

[1] Beijing Normal University, Beijing, CHINA.

Contents

1. The Organic Existence Theory
    1.1. The Argument of Fideism
    1.2. The Argument of Natural Philosophy
    1.3. The Argument of Idealism
    1.4. Conclusion
2. The Ontological Organic Theory
    2.1. Is Nature I Organic?
    2.2. Is God Organic?
    2.3. Is “Logic” Organic?
    2.4. Conclusion
3. The Organic Assurance Theory
    3.1. The only Nature
    3.2. Panentheism
    3.3. Delimitation of consciousness
    3.4. Conclusion
4. Bio-Truthism
    4.1.The basic principle of Nature
    4.2. Show & Unity &Reflection
    4.3. Thought is path.
    4.4. Conclusion

Резюме. Люди часто говорят, что органическая природа в основном относится к отношениям между конкретными существами, то есть отношениям между одной вещью и другой. Этот тип органического свойства фактически горизонтален и не может объяснить его происхождение. Есть три распространенных способа аргументации в истории. Первый из них – это аргументация фидеизма, представленного христианской, самой влиятельной религией. Считается, что это органическая способность исходит от Божьего дарования, потому что Бог создал весь мир. Второй путь – это естественная философия, основанная на греческой традиции. Считается, что слово «природа» у Аристотеля изначально имело двухслойное значение спонтанной «сущности» и физической субстанции или реального мира. К сожалению, последующие

поколения в основном помнили только второй способ. Третий путь – это аргументация идеализма, здесь можно привести пример философии Гегеля в качестве типичного представителя. Гегель настаивает на идее, что логика является «априорной», и он рассматривает вещи и связь в природе как связь или «результат» выведения всего из абсолютной идеи. Сегодня эти три способа аргументации почти одинаковы по своей основной форме или методу, и они признают органическое свойство природного мира в качестве экспрессивного, и в целом имеющего значение второго порядка. Однако проблема заключается в понимании, как «основополагающие» вещи и причины могут быть органическими и как их органические свойства и способности могут передаваться? По этой причине, каждый из основных вещей стремится продемонстрировать свои собственные органические свойства и способности, таким образом – природа изначально имеет органическое значение, как и всеведущий и всемогущий Бог является органичным и биогенным, а также и логика должна быть органичной. Итак, каким образом может передаваться это универсальное органическое качество? Первый возможный ответ гласит, что две природы являются по существу едиными; второй – предлагает универсализм, а именно пантеизм, который считает, что Бог есть во всем; и третий, посредством феноменологических подходов – утверждает, что все обсуждаемое является сознательным. Внутри себя, все это «*априори*» органично. Чтобы взаимно увязать ноумен и феномен, Хайдеггер указал, что природа, бытие и мировой разум – представляют собой существенное единство, особенно в своем фундаментальном значении. Они имеют общее происхождение, хотя и существуют с разными именами, и природа, по-гречески, также обладает свойством самопроизвольного возникновения и появления естественно саморазвивающегося существа. Этим путем можно преодолеть «онтологическое различие» между существами и существованием. Хайдеггер также отметил, что мышление – это не теория, но путь, а путь – не что иное, как истина, что согласуется с принципом идентичности мышления и бытия Парменида. Следовательно, Дасейн-человек, жизнь которого следует космическому существованию, должен научиться мыслить неотъемлемо от бытия и нести ответственность за бытие. Биокосмология означает, что вселенная в основном органическая и не дуалистическая, а Динамическая, Биполярная и Триадная (и Триадологическая). Это возвращение к глубинам (основаниям) философской традиции Аристотеля–новое движение назад в прошлое, но, таким образом, в естественном Динамическом Циклическом Восходящем развитии – реализация движения в Натуралистическое (благополучное) Будущее.

Ключевые слова: Природа, Мир Природы, Органицизм, Био-онтология, Органицистская онтология, Био-теория круговой поруки, Био-теория истины, Биокосмология, пантеизм.

Содержание

1. Теория органического существования
    1.1. Аргументация фидеизма
    1.2. Аргументация естественных наук
    1.3. Аргументация идеализма
    1.4. Заключение
2. Онтологическая Органическая теория
    2.1. Является ли Природа-I Органической?
    2.2. Является ли Бог элементом Органической системы?
    2.3. Является ли «Логика» Органической?
    2.4. Заключение
3. Теория Органического обеспечения
    3.1. Единственно Природа
    3.2. Панентеизм
    3.3. Разграничение сознания
    3.4. Заключение
4. Био-Истина
    4.1.Основной принцип Природы
    4.2. Демонстрация и Единство и Рефлексия
    4.3. Мысль есть путь
    4.4. Заключение

The object and purport of organic philosophy is organicity. However, generally speaking, the organicity of everything is not simple and self-explanatory. As a philosophical topic, it must be fundamentally explained in a rational sense. Since I have written an article exclusively dealing with the meaning of organicity[2], this paper is a continuation of this issue and a more in-depth exploration.

1. The Organic Existence Theory

The organicity usually refers to the interrelationship of beings, that is, the relationship between one thing and another, or the object-object relationship for short. This organicity is actually a kind of "horizontal" one, which is related to the debate between modern popular mechanistic theory and dialectics. Later, people realized the limitation of mechanistic theory, that is, the views of mechanistic theory on the question were too simplistic and superficial that they focused only on one point without others or looked only at the surface without seeking the inner. As a result, the organic theory gradually won the controversy. Whereas the new problem is that apart from explaining that all things exist in relationships, various organic theories still

[2] Liu Xiaoting. First Organic Marxist Forum, Beijing Normal University, June.2018.

cannot clarify the root source of their own. In the past, there were mainly three popular ways of arguments.

1.1. *The Argument of Fideism*

The argument of fideism is represented by the most influential Christian philosophy, especially the medieval scholastic philosophy. The scholastic philosophy believed that the organicity of this being was originally derived from God's endowment, because God created this world and everything was in God's control. Thus, although the world is complex, it is "unity" in the creator God, and the organicity among the beings is nothing more than an external manifestation of the unity in God.

1.2. *The Argument of Natural Philosophy*

Greek natural philosophy represents the fundamental tradition of Western organic philosophy. It believes that the reason for the problem is that in Aristotle, the word "nature" originally had dual meanings[3] (This paper summarizes its six aspects): the "nature" (i.e. the natural way) and the corporeal substance (i.e. the natural world). It is only that people lost the first meaning in later discussions, leaving only the second meaning, i.e. beings as the objects. The first meaning of nature (Nature I for short) is actually organic, because everything happens naturally in it, and it has complete unity.

1.3. *The Argument of Idealism*

The argumentation of idealism emerged after Descartes's philosophy of consciousness centering on "I think", especially taking Hegel's philosophy, the highest representative of German idealism, as a typical example. Starting from Kant's theory of consciousness or phenomenology, Hegel embodied the logic of Fichte's self-differentiation and regression of absolute ideas, thus he constructed an absolute systematic philosophy of logic priority. Thus, in his natural philosophy, the relationship between the items is the link or "result" of the logic operation of absolute idea. Since logic is "prior", the dialectical relationship between the various matters is rooted and natural.

1.4. *Conclusion*

Based on the above analysis, we can see that the organicity of the so-called natural world (Nature II for short) is still only an apparent or explicit organicity, that is, the external "second-order" organicity. From today's point of view, these three ways of discussing organicity roots are actually the same in the basic form. In other words, the faith structure of Christian philosophy, the structure of Greek natural philosophy, and the structure of German idealism are basically identical; while their differences are that the God of Christianity is also an entity, the Nature I of Greek

[3] Aristotle. Metaphysics, Vol.5, Chapter 4. Trans by Li Zhen. Shanghai People's Publishing House, 2005, p122.

natural philosophy is not an entity, and the logic of idealism is only a prior absolute idea.

2. The Ontological Organic Theory

The next question is: Why are God, Nature I, or the absolute idea organic? How can their organicity guarantee that Nature II is also organic?

The first question here involves the selfhood of these "first-order" determinators, so it is a deep or profound organic problem. The second question is about how organicity is transmitted and its reliability, so it can be called the "assurance" issue of organic transmission. The foregoing discussion means that several different ways have already seemed to solve the "second-order" or apparent problems, but they still cannot solve the issue of selfhood. Consequently, here at first, we examine how the first question can be self-evidence.

2.1. *Is Nature I Organic?*

According to the meaning of Nature I, the answer is obvious, because the natural meaning is self-sufficiency and completeness, and even the fundamental meaning of organicity comes from this "nature".

2.2. *Is God Organic?*

Similar problems have occurred many times, such as is God omniscient and all-powerful? The sages have also given explanations through a deficiency argument. For example, Augustine pointed out that evil was nothing but a deficiency of goodness. According to this logic, God must be organic, because organicity means that God can solve all problems and contradictions concerning selfhood without others. Otherwise, He is not self-sufficient, self-possessed, and everlasting. As for the issue of God's trinity, the basic argument mode is that they are the three different appearances or manifestations of the same God Himself and the three faces of truth, but they are inherently one. This transcendental identity certainly transcends the general organicity.

2.3. *Is "Logic" Organic?*

It is now two centuries later when people talk about Hegel now. But this time interval is not meaningless, because people did not discuss Hegel in this way a century ago. At that time, it was mainly limited to ontologically arguing the relationship between mind and thing, which was the basis to distinguish the materialism from the idealism, but did not fully understand the essence of Hegel's philosophy. This limitation also applies to those who endeavor to defend Hegel.

Today, it seems that Hegel's idealism philosophy is actually trying to construct a pure philosophy. To the end, it can only leave a purely formal principle (which is called logic by Hegel). This pure form is invisible to the naked eye in reality and can only exist in the intuition of ideas or thoughts. Therefore, Hegel's "idea" is criticized as that it is not practical. Obviously, such criticism has not fundamentally touched the essence of the problem, and it is like the story of buying the case and returning the

pearl in it. According to this understanding, the problem of Hegel's natural philosophy is indeed great, because suddenly a purely spiritual thing has become a pure material. There can be no dialectics here except for arrogation! The mistake here is to completely regard the nature of pure form and pure logic in Hegel's theory as the character and patent of the spirit, which is still concrete. On the contrary, if Hegel's ontology is only a pure form and is the "logic" as the foundation of everything formed by thinking, then its existence and performance are naturally and must be dialectic and organic, but in Hegel's times this task could only be speculative and not be understood in plain language nor easy to understand, since in that time, the logic tool to understand this kind of task had not been created, so at Hegel`s time, logic is the only way to understand things.

2.4. *Conclusion*

Now the problem has been basically clear. Only in beings there is non-organicity, but in existence there is no non-organicity. In other words, the "existence" as the pillar behind the natural world is organic or exceeds the inorganic nature, and it is also the "existence" that makes the organicity of being's natural world "rooted".

The problem is that God, Nature I, and absolute idea are not the same thing, so how are they commensurable? The reason is simple, that is, God "is" the nature. Logically, God has all the attributes of Nature I (there are many discussions on God and nature in the books on Western study of science and religion), and God has other attributes, such as the ethical attributes of intervening in the society and the spiritual attributes involved in the mind, etc. It is generally called God's "personification". But is this multi-attributes God an abstract pure existence? This is a problem that is often questioned by Judaism and Christianity. Heidegger even believed that God in the minds of believers was actually only a being (relative to things) but not existence itself[4]. In the past, most people considered that Hegel's absolute idea was almost Christian God, which is not wrong in general. Now it seems that Hegel's absolute idea seems to be closer to the "nature" in Greek natural philosophy, because Hegel also accepted logic priority as an absolute transcendental nature, that is to say, this so-called logic priority itself is natural; otherwise it still has a premise and cannot exist as ontology. In this way, we can ignore the apparent differences among nature, God, and absolute idea, and only regard them as things that are essentially identical in general or equivalent in basic ontology. As a matter of fact, they are the different faces of the same "nature" from different perspectives, or "trinity". Accordingly, as long as we choose the most "concise" nature and focus on the discussion, the latter two ideas can generally be explained.

3. The Organic Assurance Theory

The aforementioned second question is: How can organic first-order noumenon ensure that the second-order nature is natural or organic? For instance, According to

[4] Heidegger, Beiträge zur Philosophie (Vom Ereignis). Trans by Sun Zhouxing, The Commercial Press, 2012, p117.

Jewish-Christian, God is omniscient and omnipotent, how can the people he creates be so strange of varied appearance? Here, we still look at the treatment of each of the three ideas, and then focus on the general argumentation issues.

3.1. *The only Nature*

We have seen that in the past books discussing dialectics basically demonstrated the organic property of nature through the relationship between universality and particularity. That is, universality resides in particularity and p articularity reflects universality. In other words, Nature-I resides in Nature-II and nature-III reflects nature-I, they are two-in-one. This principle is so straightforward that everyone is self-righteous enough and gives up asking. Even this principle has gained huge and extensive generalization, including the relationship between God and Nature, such as pantheism to be the most typical one. And this is exactly the crux of it.

3.2. *Panentheism*

Generally considered, creationism is panentheism, because everything comes from God's creation, all glory also belongs to God. But in this way, we must solve the problems of organicity and vitality of the created world for the reason that after God create one world. It is hard to determine the unity of the specific world diversity and their respective characteristics. In this case, either continue to use the logic of universality and particularity to demonstrate then God is equated with nature and loses its supremacy, or take a purposeful or value argument then the purpose of God's creation will appear as chaotic as the world in front of us. Not to mention that objective arguments can easily be attributed to the rules of the fideism instead of logic.

Pantheism tried to overcome this difficulty and made panentheism, that is, God cannot bury itself behind every concrete thing and make it look like what people see. However, the world in front of us is rich and colorful and even contradictory to each other and then God will always be different because of his things in order to be consistent with nature. So it was the diversity of God from the diversity of nature; with all this leading to the polytheism and eventually destroying God’s uniqueness and supremacy. This kind of thinking can be seen as a fall or return to polytheism in the primitive people era. It is no wonder that it was been treated as heretics by orthodox churches.

3.3. *Delimitation of consciousness*

The western philosophical community staged an anti-Hegelianism chorus in the late 19th century. One of the focal points started from Hegel's natural philosophy. Many natural philosophers scoff at Hegel's description and take it to be absurdity and irrationality. Among them, the root of the problem is that he forced the logic into the natural world and even ignored observations. He also treats this way in the field of history, and even put forward the principle that history must be consistent with logic. In response to this, he believes that the research is not the start point but ending

point[5]. The previous analysis has revealed that Hegel does have its problems. He himself did not make it clear. Of course, critics did not understand and tolerate it. Looking at today, Hegel's line may not be completely wrong. It was the lack of description tools at the time that led to a lack of clarity in elaboration and argument.

The first person to really clarify the issue behind Hegel is the phenomenologist Husserl. Husserl clearly pointed out the essence of Hegel's problems and their mistakes for the first time through epoch (that is Kant's demarcation), at the same time, it points out how people's criticisms are indispensable. Till now we finally understood that after Hegel, mankind actually faced a break in thought or a change in philosophy. It's a pity that although people have been clamoring for change for a long time, they haven't touched the idea yet. However, Husserl's phenomenology is a kind of pure consciousness phenomenology. He "pulls" everything into his consciousness and ignores things outside of it. In this way, the things in consciousness can indeed be "told" clearly. This consciousness is not a psychological thing but a pure consciousness. He proposed to "face the matter itself," which drastically spread what Hegel did not completely highlight. However, what happened to those been epoched by Husserl out of consciousness? Is it completely gone or is it just an illusion? Should this, as Wittgenstein put it, require "silence"? It follows that things still cannot be finally resolved. Faced with serious questions, Husserl also had to resort to a priori, from genetic phenomenology to transcendental phenomenology and to make up for the logical gap through a priori assumptions. Like Kant, this is actually almost a belief. Although the late Husserl desperately wanted to construct everything in his consciousness, in addition to opening up his horizons of perceptive phenomenology, his fundamental goal of structural phenomenology has never been realized.

3.4. *Conclusion*

The foregoing discussion illustrates one principle, That is, if "Nature I" are all seen as either general or universal, Nature II is seen as specific. Using the "dialectical relationship" of universality and particularity, the organic nature between the two can be transmitted. But this "levelness" argument leads people to expect that the transcendental nature of "Nature I" has disappeared, so there is no nature I. At the same time, the meaning and beauty of human beings endowed with Nature II do not exist anymore, and they become alien objects. Therefore, Nietzsche said "God is dead." As a result, Nihilism has become widespread today.

It is Husserl who has opened up a fundamental questioning direction and method, which has deepened the argumentation of this issue and also activated the German philosophy of Idealism. Husserl took this as a deep problem, that is, Nature I and Nature II are not a matter of hierarchy. This level is not a high and low homogenous relationship, but a heterogeneous association of different property. This fundamentally points out the heterogeneity of organic ideas and mechanical issues. However, the conscious construction of Husserl's phenomenology is fundamentally

[5] Friedrich Engels, *Anti-Dühring*. Marx/Engels Collected Works, Vol. 3. People Press, 1960, p. 74.

different from that of natural philosophy of ancient Greece. Therefore, the distance to the final solution is still a long way to go.

4. Bio-Truthism

Husserl, as a philosopher at the turn of the 19th and 20th centuries, represented a transition and turning point in the history of philosophy. The philosophy after Husserl is multifaceted and colorful, with almost no uniform norms and themes, but the questioning of the nature of philosophy is deeper and more individual. Heidegger, as a student and assistant of Husserl, was better than his teacher and brought a glimmer of light to the solution of the problem.

4.1. *The basic principle of Nature*

Heidegger, who was born in 1889, had all his philosophical activities in the 20th century. This time threshold means that he no longer has the concerns of the 19th century scholars, but can go straight ahead. Heidegger had received a systematic education in Catholic theology in his early years, and he had a special liking for the medieval scholastic philosophy. He also liked mathematics, doctoral dissertation on psychology judgment theory research, and then he gave Husserl several years of academic assistants and became an early participant in the phenomenological movement initiated by Husserl. Due to these experiences, Heidegger's understanding of philosophical issues is fundamentally phenomenological, but it differs from the purely ideological phenomenology that Husserl modeled formal mathematics alone. Husserl advocated "facing the matter itself,"[6] and Heidegger deeply believed that, but he believed that the "thing itself" was here and now rather than the pure consciousness that Husserl said, because the latter cannot exist naturally. Inevitably, it is the ideal thing to seek out (*exhalt*)[7]. Heidegger claimed that the present person at this time is "Dasein". His phenomenology was originally the phenomenology of Dasein or philosophy of Dasein.

The early Heidegger constructed a philosophical system centered on Dasein. He called it the fundamental ontology[8]. Later generations called it individual Existentialism. Its characteristics are close to the individual practice philosophy. At this time, Heidegger's understanding of nature and organicity is mainly close to Kant's ideas. Perhaps after the impact of the Nazi events in the 1930s, changes in Heidegger's life have also led to changes in ideology. The objects of their interpretation have returned to history and focused on Greek ideas. Their main interest is in the natural world. Based on these principles, he constructed another "Sein" system that is different from the theory of "Being and Time" in the "Contributions to Philosophy [Beiträge zur Philosophie (Vom Ereignis)]". His disposition and scale are comparable to Hegel's philosophical books. Along this path, Heidegger contributed a series of thought articles such as "Building, Dwelling,

[6] Edmund Husserl, *Gesammelte Schriften*, Herausgegeben von Elisabeth Stroeker, Felix Meiner Verlag, Hamburg, Bände und 2, 1992. S. 159.
[7] Martin Heidegger, *Being and Time*. Trans. By Chen Jiaying. Joint Publishing, 2014, p. 14.
[8] Ibid, p. 16.

Thinking", "The Question Concerning Technology", "man dwells on this earth" and "The Origin of Art Works" in "Holzwege". It has made the most profound systematic reflection on modernity, modern technology and its philosophy.

Although Heidegger's later philosophy still stands out the Dasein, it gives him a unique identity of Ontology, that is, Dasein is the presence and representation of Sein, which disguisedly highlights the fundamental and decisive status of Sein and the importance of Dasein. Heidegger's series of later lectures, such as the Introduction to Metaphysics, specifically split the relationship between Sein, Nature, and Logos, clearly stating that they were originally one thing, that is, Logos were Natural. Nature is Dasein, and Dasein is also Logos. They are "trinity"[9] with each other, became the concept of three different meanings gradually. This shows that all the arguments at the basic level have to enter into a kind of "cycle" of arguments, showing some original inner organicity; otherwise they are not first-order. According to this logic, it is oriented toward nature itself (Dasein or logic). Thus Heidegger thoroughly deciphered Hegel's absolute ideas or logic, revealed the fundamental nature of his "natural philosophy", and also broke through the basic joints of the aforementioned three ideas.

4.2. *Show & Unity &Reflection*

Regarding nature, Heidegger not only highlighted its fundamental nature, but also extended its understanding of nature. He pointed out that nature is not only natural itself, but also self-emerging[10], that is, Sein itself manifests itself because the original concept of nature itself also has the meaning of emergence, and this is the basis for Truth or Hegel's logic to constitute its own path. Since nature possesses such «ability", there is no obstacle from Nature I to Nature II, and the organic nature of Nature I can be transmitted to Nature II through self-expression. Such an existent view of truth fundamentally deciphers the view of the truth of the mirror of knowledge during modern history. It even provides a foundation and unity for it, and reveals the deep organic relationship between Sein and being, because only Sein exists. It appears only when those who exist may be able to "represent truthfulness." This is the Sein or natural iteration within itself. This means that Sein itself is organic. In the past, the so-called dialectical connection actually stated that there was a relationship between those who existed, and now it is found that the Sein of oneself is completely integrated. This is the complete organicness or integrity of Sein, and there is no non-organicity in Sein. It can be seen that organicity is more fundamental than in-organicity.

4.3. *Thought is path*

Heidegger has been opposed to the theory of a handful of things during all his life. He believes that there is no fixed and rigid existence, and everything is in the

[9] Martin Heidegger, Introduction to Metaphysics. Trans. By Wang Qingjie, People Press, 2015, p. 150.
[10] Ibid., p. 114.

process of change and mutual relations, that is, everything is fundamentally changed. We must not look at them as a fixed, established product. Heidegger's "Ereignen", its German original meaning is also "event", the event is the occurrence, death, transformation, marching, change does not live, that is to say the whole world is an interrelated and never-ending event. This idea not only coincides with Whitehead, but directly affects the subsequent European thinkers such as Deleuze and Agamben. Heidegger called this difference between the being and the existence "theological difference."[11] This distinction means that we must break through theories about existing things and enter into thoughts about existence or events, learn to think with existence, and be responsible for being, so the people who are doing this must be a kind of cosmic existence.

In turn, Heidegger uses Parmenides's interpretation of the same principles of thinking and existence to illustrate the true nature and positive significance of the idea. He believes that thinking is not a theory but a road, and that the road is truth, and the mission of the mind is to constantly portray landmarks. Everything is in the matter[12]. This is fundamentally consistent with the first chapter of Lao Tzu's "Tao Te Ching":

> The Way that can be told of is not an Unvarying Way; the names that can be named are not unvarying names. It was from the Nameless that Heaven and Earth sprang; the named is but the mother that rears the ten thousand creatures, each after its kind. Truly, 'only he that rids himself forever of desire can see the Secret Essences'; he that has never rid himself of desire can see only the Outcomes. These two things issued from the same mould, but nevertheless are different in name. This 'same mould' we can but call the Mystery, or rather the 'Darker than any Mystery', the Doorway whence issued all Secret Essences.[13]

If we change the Nameless and the named into existence and existence, nature and the natural world, it just confirms the dialectical connection between the apparent organic nature of the universe and the deep organic nature. From this we learned that after thousands of years of inquiry, although humans have not left things, they are increasingly returning to their true nature while deepening their understanding of things.

4.4. *Conclusion*

At this point, we use a variety of ideological resources, using a razor of thinking to do a deep analysis of organicity, which is a deep organic theory. This kind of deep organic theory does not flaunt the organic nature outside of things, but in things, it is

[11] Martin Heidegger, Beiträge zur Philosophie (Vom Ereignis). Trans. By Sun Zhouxing, People Press, 2012, p. 194.

[12] Martin Heidegger, Identität und Differenz. Trans. Sun Zhouxing. Beijing: The Commercial Press, 2011.

[13] Laozi. *First Chapter*, annotated by Rao Shangkuan. Zhonghua Book Company, 2006, p. 2.

only the perspective of the examination of the problem that has changed and the organic nature of the universe has been seen. This also answered by the way, why is our position called "Biocosmology"? It is because the universe is fundamentally organic and it is an organic result. Imagine if the universe can exist if there is no inherent depth of organicity. Of course, the so-called deep organic nature is not outside the universe, but in the universe. All these so-called discussions are merely phenomenological or existential analysis.

The understanding of the organic nature of the universe here extends Aristotle's tradition and makes it open to Aristotle's philosophical traditions such as Democritus. This is a positive sign of ideology. It once again confirms the inherent relationship between returning and breaking, and it also brings many far-reaching questions. It provides an existential gateway to the current difficulties concerning ecological ethics and guides us to look ahead Greater truth.

References

Aristotle. (2005). *Metaphysics*, Vol.5, Chapter 4. Trans by Li Zhen. Shanghai People's Publishing House.

Engels, Friedrich (1960). *Anti-Dühring*. Marx/Engels Collected Works, Vol. 3. People Press.

Heidegger, Martin (2011). *Identität und Differenz*. Trans. Sun Zhouxing. Beijing: The Commercial Press.

Heidegger, Martin (2012). *Beiträge zur Philosophie* (*Vom Ereignis*). Trans. by Sun Zhouxing, The Commercial Press.

Heidegger, Martin (2014). *Being and Time*. Trans. By Chen Jiaying. Joint Publishing.

Heidegger, Martin (2015). *Introduction to Metaphysics*. Trans. By Wang Qingjie, People Press.

Husserl, Edmund (1992). *Gesammelte Schriften*, Herausgegeben von Elisabeth Stroeker, Felix Meiner Verlag, Hamburg, Bände und 2.

Laozi. (2006). *First Chapter*, annotated by Rao Shangkuan. Zhonghua Book Company.

Liu Xiaoting. (2018). First Organic Marxist Forum, Beijing Normal University, June 2018.

CANCER AND THE ORGANICIST LAWS OF NATURE

Rudolf KLIMEK[1]

РАК И ОРГАНИЦИСТСКИЕ ЗАКОНЫ ПРИРОДЫ

Рудольф КЛИМЕК

Abstract. The basic regulator of the existence and development of a person runs through selective elimination of individuals least suited to the environment what guarantees the continuous development of the Homo sapiens species. In protection of mankind a special place is taken by heredity and the upbringing of every person, who, basing on the free will has to live in accordance both with his own auto-teleological scale of values and the rules of social life. Personal ageing is characterized by a gradual loss of an internal equilibrium and by a lessened ability for self-defense and self-regulation of the man in response to the environment action; all the more, in the case of ageing – his "free will" and "auto-teleological scale of value" are equally (or, even more) are essential for older persons for their healthy life. An increased human weariness (fatigue) serves as a measure of entropy. Each body cell threatened with the end of its metabolism may extend its life in the form of a neoplasm cell together with the increase of dissipation of information, mass and energy in the tissues environment. The latter is a sign of the beginning of threatening the existence of the whole multi-cellular organism according to the local formulation of the **second law of thermodynamics** saying that **the negative source of entropy (decrease of cellular metabolism) generates its positive source!** It means that in the universe, as we say, "good always defeats evil!" but, factually, this is the natural (Organicist) law – Of ascending (in complexity) Self-evolvement of the universally (substantially) living world (Kosmos). What is more, the natural laws work harmoniously and independently of humans' consciousness (which is just the tool – Function – of the self-evolving Nature); and while consciousness interprets the universe (and its laws and order) more or less correctly, and may even disrupt them – but doing this only locally, and not globally!

Keywords: cellular and social life, natural carcinogenesis, iatrogenic cancer, $E =^{i} mc^2$

Contents

1. Introduction: Natural law of carcinogenesis
2. Prevention of iatrogenic cervical cancer
3. Cellular and social life
Conclusions

[1] World Information University, Krakow, Poland.

Резюме. Основным регулятором существования и развития человека является выборочная ликвидация лиц, наименее подходящих для окружающей среды, что гарантирует непрерывное развитие видов разумного человека. В защите человечества особое место занимает наследственность и воспитание каждого человека, жизнь которого, основываясь на его свободе воле – выстраивается в соответствии как с присущей собственной телеологической шкалой ценностей, так и с правилами общественной жизни. Старение человека (как личности) характеризуется постепенной потерей внутреннего равновесия и уменьшением способностей к самозащите и эффективной саморегуляции организма в ответ на вредоносные воздействия среды; тем более, в случае старения – «свободная воля» и «присущая телеологическая шкала ценностей» в равной (или даже большей степени) необходимы пожилым людям для их здоровой жизни. В отсутствие этого возникает повышенная утомляемость человека (усталость), и выраженность последней служит мерой энтропии. Каждая клетка тела, которая находится под угрозой прекращения своего метаболизма, может продлить свою жизнь в виде клетки опухоли, одновременно с увеличением диссипации информации, массы и энергии в окружающие ткани. Последнее свидетельствует о начале угрозы существованию целого многоклеточного организма в соответствии с локальной формулировкой **второго закона термодинамики**, в котором говорится, что **отрицательный источник энтропии (снижение клеточного метаболизма) генерирует свой положительный источник!** Это означает, что во Вселенной, как мы говорим, «добро всегда побеждает зло!»; но, на самом деле, все это являет собой естественнонаучный (Органицистский) закон – О восходящем (в сложности организации) Саморазвитии универсально (по существу) живого мира (Космоса). Более того, естественные законы работают гармонично и независимо от сознания человека (которое является всего лишь инструментом – *функцией* – саморазвивающейся Природы); и хотя сознание более или менее правильно интерпретирует Вселенную (и ее законы и порядок), и даже может нарушить их – но делает это только локально, а не глобально!

Ключевые слова: клеточная и социальная жизнь, природный канцерогенез, ятрогенный рак, $\boldsymbol{E =^{i} mc^{2}}$

Содержание

1. Введение: Естественный закон канцерогенеза

2. Профилактика ятрогенного рака шейки матки

3. Клеточная и социальная жизнь

Заключения

1. Introduction: Natural law of carcinogenesis

Man for centuries did not take into account the possibility of penetration even through opaque objects newly rediscovered informational rays and patterns, which are the quintessence of Biocosmos (see: video-document of electronic world congress "Biocosmology and cancer" (http://tiny.pl/gnzdk-lectures of Konstantin S. Khroutski, et al.). Universe is the informational four-dimensional spacetime being, understood by a mankind as a spontaneous mutual exchange of matter, information and energy between its elementary parts. For example self-organization of cells to protect their cellular forms of life makes understandable the emergence of cancer diseases that the public knows only of course for their last stage without taking into account the patients' own leading role in this slow and lengthy process. Already a new form of cell is the first signal for activating systemic repair and defense mechanisms.

Matter and energy are just two aspects of the threefold informational essence of the reality. Mass is just super concentrated form of energy and both entities can be turned from one form to the other and back again owing to information rays and pattern field (natural laws), what only man describes as informational basis of individual and social human life, which are observed as existence of real cosmic particles: $E =^{i} mc^{2}$. The equal sign (=) denotes matter and energy as quantitatively equal and at the same time raised to the power of information (=i) it defines the information's part in the equation [2, 3]. Man himself is only the smallest part (quantum being) of human verbal world, but the quantum of mankind are parents, because only they can bring each man or woman to existence, forming race of human beings. Information has a significant impact on the lives and health of people already in the unique intrauterine human development stage, later in his upbringing, education, and finally, in regard to their own existence of the family as the most valuable supporting structure in the existence of the Homo sapiens species.[4, 5].

My philosophy of being verifies also the existence of human transcendental verbal world (ideas), because language creates the informational basis for individual and social human life. Mathematicians have used their methods to study unusual phases or states of matter in ordinary three-dimensional materials, in which quantum effects of information are often hidden by random particle movements and only in extreme cold suddenly become visible when all moving cosmic particles cease. Alas A. Einstein in his theory of relativity disproved the "ether" known as the fifth element to air, earth, fire and water of antique universe, once thought to fill all space and allow waves to pass through it and interact with matter and energy, what presently means information not to mention about antimatter. Each person has own life experience influencing the way of thinking and understanding speech done in completely different situations using speech, mimicry, and voice intonation[2]. Each person resonates to an even single word, if he understands it and wants to know how much he can use the information. The existence of information rays and pattern was proved by experimental documentation of sight's nature as third integrated part of reality which can be revealed by intellectual observations, what recently has been

[2] Klimek R (2014). "Threefold material-informational-energetic reality: $E =^{i} mc^{2}$," *Biocosmology – Neo-Arisotelism* Vol. 4, No. 4 (Autumn 2014), pp. 405–415.

demonstrated at the 18ISBC (on October 12, 2018, at the Novgorod State University after Yaroslav-the-Wise, in Veliky Novgorod)[3].

Information is transparent event (therefore for man hidden!) in each cosmic part and emerges under appropriate conditions rather than as the elements of the object, existing in any object among its elements as not visible but potential attribute. Each mirror picture appears thanks to resonating informational field ("pattern information") in place of observer's localization, wherein the information rays coming from real object and from eyes meet together and have the identical value of their unique waves (Fig.1).The course of spatial radiation takes place on the way of real information (image) travel from the object of observation AB, through the mirror to the observers or cameras of digital transmission records (Fig.2). Transmitted images are successive informgraphs (CD, EF) of the original object, i.e. a two-dimensional portrait. Practically everyone can see own silhouette visible in the mirror, which reflection does not contain any single atom of the real person.

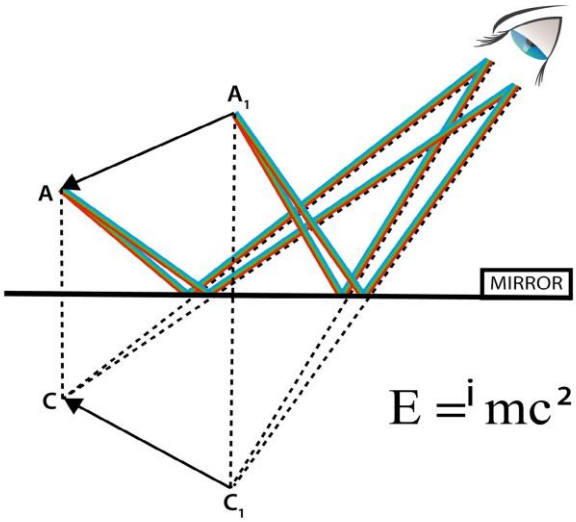


Fig. 1. The sight (**…….**) and light rays – between eye, mirror, real AA1 and informational CC1 objects.

[3] See the video-film: "***Information of spacetime Biocosmos***"– https://drive.google.com/file/d/1DlDmxxIMMZ5OoQSq0NUuGRR8YRni3Jzx/view?usp=sharing.

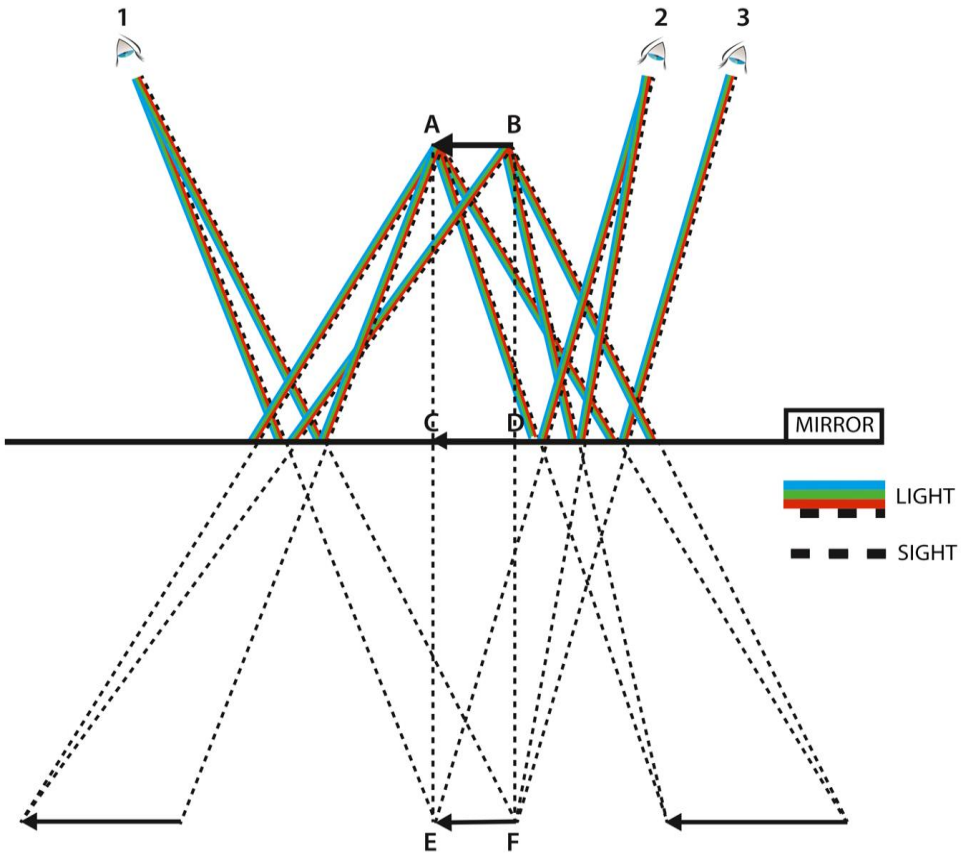


***Fig.2**. Information rays of transmitted images from original object AB to informgraphs CD EF*

2. Prevention of iatrogenic cervical cancer

Any illness has not only a cause or set of causes based on the physical human condition and environment, but also includes personal and collective evolutionary informational processes. Form the medical point of view many things are known to increase the risk of carcinogenesis which as a natural process is an alternative of cellular or social death. Neoplasm cell is an effect of carcinogenesis, but not a causal source at which cancer begins its course or existence. Information about the carcinogenesis and cancers has to be understood by the informed layman as well as by scientist, because human cancers are closely linked to certain behaviors, e.g. smoking is the biggest preventable cause of death and disease, what is also a vital aspect of cancer prevention, but a natural delivery is more important. The most important value for a human being is life, and (due to Aristotle) his Self-actualizationm during the entire ontogenesis. In turn, all this is transmitted and initiated by the two gametes originating from each of parents, nevertheless the fetal maturity to independent life can be reached only in mother's womb. The molecular biology has differentiated embryonic somatic cells and gametes, what enabled their direct examination by nuclear magnetic resonance imaging and spectroscopy to distinguish cancer from pre-cancerous lesions or benign tumors.

Cancer pattern is sharply demarcated from no-infected cells, because the transformed cells can grow under some conditions that block the growth of no transformed cells. Physiologically, the life of an individual cell ends with its division into two cells of the same genetic type or is a result of dematerialization of its matter into energy needed for formation of biological structures, e.g. blood or placenta. This phenomenon is already observed in embryo cells (blastocytes) before implantation in the uterus. During birth and rapidly thereafter microbes from the mother and the surrounding environment colonize the infant's gut, because during vaginal delivery the contact with the maternal vaginal and intestinal flora is very important. Infants born by cesarean section are lacking specific group of bacteria found in infants delivered vaginally, what can have potentially lifelong effects on the child's health. They are at increased risk of asthma, obesity, diabetes and cancer as man ages. Now current cesarean section rate was of over 30% despite evidence that a rate of 5% to 10% would be optimal. Some caesarean deliveries are performed simply due to maternal request (informational cause), what may incur several risks for the child: neonatal depression, fetal injury during delivery, increased likelihood of respiratory distress, and breastfeeding complications or autoimmune diseases.

The goal of the zygote as a unique single cell is the creation of a new being to uphold the species, but the development of the first neoplastic cell only extends the cellular form of life without the possibility of autonomous existence, since such a cell may form a new clone only in a similarly unique organism, in which it had developed. However, carcinogenesis cannot be eliminated, but illnesses which are caused by neoplastic cells can and should be treated, as they can be healed more often by directly fighting the pathogenic factors and indirectly strengthening the whole organism not only through neurohormonal therapy or immunopotentialisation with vaccines, but also using responsible information.. Unfortunately, up to date, for diverse personal reasons, information is often used to agitate for harmful ideas, which starts a new type of diseases (informatonoses). The information cause of this disease is disruption of the relationship between how man should live and act in accordance with the values he recognises and how he actually lives, especially being physician! For example Human Pappiloma Virus (HPV) as the oldest virus to afflict mankind – still cause warts today more often than at any time in its history. Virus infects about 20 million people and only 10.000 women are diagnosed with cervical cancer annually. Hans-Ulrich Bernard et all has used genetic genealogy to study the evolutionary history of HPV and concluded: "Homo sapiens was never without HPVs, and consequently never without warts and cervical cancers", because first cancer cell is signal of insufficiency of organism self-control to exist[4]. Now we know that genome of cervical cancer cells is the sourse of more than hundred types of HPV viruses which are cause of infection diseases being only additionaly but not sufficient cause of cancers.

[4] See: van Doorslaer, K., zur Hausen, H., Villiers, E.M., Bernard, H.U., Burk, R.S. and Chen, Z. (2010) Classification of Papillomaviruses (PVs) Based on 189 PV Types and Proposal of Taxonomic Amendments. *Virology*, 401, 70-79. http://dx.doi.org/10.1016/j.virol.2010.02.002

First cancer cells are foreboding signals on the last human way to die and therefore man should trying to prevent the carcinogenesis instead to cure only the cancer diseases, because first cancer cell only indicates the insufficiency of organism self-control to exist. As people get older their cells start to “slow down” or become less effective and unable to mount as quick and/or strong any response as a younger person. Personal ageing is characterized by a gradual loss of an internal equilibrium and by a lessened ability for self-defense and self-regulation of the man in response to the environment action. It results in an increased value of human weariness (fatigue) as a measure of entropy, the production of which is always greater than zero.

The smallest unit of information describing all possible states of any system is a qubit. Every matter-information-energy being (structure, process) in the universe contains in its cause information, which in the cause-effect feedback is a desired and immediately afterwards created effect what is always accompanied by the creation of entropy, the magnitude of which is also described using qubits. In medicine this allowed to understand the origin of aging and cancer. At the same time, information about the carcinogenesis is the full Information about both the carcinogenesis itself and the individual himself. Therefore, another way of strengthening the whole organism is the Biocosmological providing the individual with relevant conditions and information for effective realizing his higher ontogenetic goals, which substantively allow his considerable contribution to realizing the higher sociocultural strategies, and therethrough harmonize the state (health) of the bio-organism. But, first of all, we ought to recognize the Organicist truth (Biocosmological law) – Of ascending (in complexity) Self-evolvement of the universally (substantially) living world (Kosmos), i.e. of its each living thing (subject). In this course, as we clearly see – the fight with cancer has both (of equal importance) the biomedical and Biocosmological constitutes. For that reason, we urgently need the Integralist scientific basis (Integralist cosmologies and scholarly foundations) to integrate them both.

3. Cellular and social life

Man is endowed with free will, which ensures a good and functioning social life only as long as the eternal laws of nature are followed. Humans do not create these laws, but can only strive to understand them better in order to use (follow) them, e.g. taking into evaluation the character of cancers or infertility and why the prolongation of human lifespan increases the number of neoplastic illnesses as the organism ages, but the ageing is not illness! The basic regulator of the existence and development of a mankind runs through selective elimination of individuals least suited to the common environment what guarantees the continuous development of the Homo sapiens species.

Therefore K. Khroutski demands increased methodological medical procedures on the side of health and not only on the side of predominantly diseases, as is the case today[3]. In treating neoplasms doctors use scalpels, lasers, radioactive radiation and even poisons as effective tools, part of which is also language, made up of words,

which are understandable by patients as necessary factor in all medical prevention and prophylaxis so that everyone could understand the primary significance of own personal life style in the formation of social health along with importance of caring about the environment inhabited by people. Essentially, however, dynamics of life processes means as the inner self-regeneration of a subject's life activity and growth potentials, as the active and effective functioning in the relevant sociocultural milieu[5]. Otherwise, in the case of discrepancy between the inherent potentials and the external conditions for the effective sociocultural functioning and Self-actualizing (thus realizing the personal growth) – the only option for each body cell threatened with the end of its metabolism is the extension of its life in the form of transforming into a neoplasm cell together with the increase of dissipation of information, mass and energy in the tissues environment. This dissipation becomes a local sign of the beginning of an illness threatening the existence of the whole multi-cellular organism.

Due to modern technology one may define the most endangered parts of the organism via magnetic resonance imaging with spectroscopy. Finally, the modern thermodynamic methods found a direct use to determine the characteristic changes in cells undergoing carcinogenesis in form of the local formulation of the **second law of thermodynamics** saying that **the negative source of entropy** (decrease of cellular metabolism) **generates its positive source!** It means that in the universe good always defeats evil! What more, **the natural laws work harmoniously without the involvement of humans free-will!** Herewith, in the light of aforesaid, and in respect to the organismic level – the saving of an organism (that is under the danger of carcinogenesis) is essentially its shifting into a higher sociocultural level and the relevant milieu for the efficient Self-actualization of a person in premorbid condition; in old age – mainly through the Information-constituent of the matter-information-energy interrelation and unity, and their telic hylemorphist activities and effects.

Already Leonardo da Vinci stated that nature does nothing in excess or with mistakes, while John Paul II added that: “modern man seems to be continually endangered by what is his own creation”. Each person’s unique informational identity appears in the moment the two gametes with different parental identities merge into new cell (zygote), which biological importance is demonstrated by the huge selection from millions of dying spermatozoa and hundreds of thousands of egg cells to be used at the moment of conception. The journey through death towards life is a mystery of an inter-generational transfer of life between generative cells of the grandparents and individual persons. It explains the genetic relation between diagnosed cancer identity and just genome of grandparents. The reproductive cells of

[5] In the “*Nicomachean Ethics*”, Aristotle concludes 1.9 by repeating and even strengthening the demand that happiness include “a complete life” – both “complete virtue and a complete life are required” (1100a4-5) – for the *eudaimonia* of a man (his happiness, hence – his wellbeing and health). In general, as the researchers conclude – “According to Aristotle, *eudaimonia* is constituted, not by honor, wealth or power, but by rational activity in accordance with virtue over a complete life, what might be described today as productive self-actualization.” – see: https://www.philosophybasics.com/branch_eudaimonism.html .

the grandparents influence the unique identity of the parents, whose gametes in turn influence the cellular genome of their children. Therefore a single zygote, whose environment is also important for its future development, defines the unique identity of each person, whose life is determined by free will and neoplasms. In this, gynecology has a special place by protecting the patients' health from their conception in accordance to the contemporary level of knowledge, avoiding iatrogenic mistakes. Once death occurs, the atoms of which the body is made – fall apart into independent entities, but the person's past deeds leave behind accessible information about his unique life, which already began in the informational program of his own zygote, and still exists in his informational legacy or in the social memory of individual life[6]. Every person, fulfilling himself in social life with other people, is created through the unification of generative cells of his/her parents as a unique single cell (zygote) to uphold the species. Oppositely, the development of the first neoplastic cell only extends the cellular form of life without the possibility of autonomous existence.

Carcinogenesis cannot be eliminated, but illnesses which are caused by neoplastic cells can and should be treated, as they can be healed more often by directly fighting the pathogenic factors and indirectly strengthening the whole organism through neurohormonal therapy or immunopotentialisation with vaccines. Every living cell, in order to function, must uphold its own metabolism through the exchange of matter, information, and energy with surrounding cells, as well as complementing their functions by producing hormones, enzymes, or antibodies to uphold the function of individual organs and the whole body. If for some reason this exchange becomes limited, the cell initially limits additional activity. Finally, in order to counter the demise of its cellular existence, the cell must change the cellular genome which controls the metabolism. Neoplasm as a new one time biological self-organized event – extends the cell form of life by improving and minimizing its own metabolism and this takes place due to increase the dissipation of matter, information and energy in the environment. This fact results from their statistically conditioned self-organization in a unique biological organism, and they are only able to develop in that organism. Owing to such dissipation, a neoplasm reduces in life span of the organism, thereby reducing its own.

Matter and energy are just two aspects of the threefold informational essence of the reality. Sight, light, color and form themselves are not only the subjective "perception" or "cognition", but first of all the original forms of the information feedback as an exchange of verbal, vocal and non-verbal signals (symbols) in a given situational context in order to achieve a better level of cooperation. The expression of the eyes during the conversation testifies the emotional state and is usually the first reaction to information sent by another person and may reveal true personal feelings and opinions with so fast flow that people often do not even realize it. Exemplary for decades the formation and different causes of cervical cancer have been studied, in order to model all diseases, then completing the new equivalent equation $E =^{i} mc^{2}$.

[6] Klimek, Rudolf (2014). "Threefold material-informational-energetic reality: $E =^{i} mc^{2}$", *Biocosmology – Neo-Arisotelism* Vol. 4, No. 4 (Autumn 2014), pp. 405–415.

The decision about the truthfulness of an event can be in accordance with it, or it can be a lie based on bad conscience. Therefore Biocosmologists demand the increased medical procedures on the side of health and not only on the side of predominantly diseases, as is in today's medicine.

Conclusions

Being is a basic part of the triune Biocosmos whose quintessence is life, i.e. the informational interchange of matter and energy among directly or indirectly visible particles of universe. The most significant quality of alive being (having life) is the distinguished possibility of transferring its life from one person, place or situation to another, because life is not only quality which alive people, animals and plants have when they are not dead, but which solely cannot move away from the remaining not living objects and substances [3, 4].

Now the observable beings refer to the capability to detect not only light, but first of all the information rays coming from any object and moving in any direction not being restricted, what e.g. happens with light rays or speech sounds[7].

The truth about the natural cause of cancer, which is commonly defined as all neoplastic diseases, astounds people. The word 'truth' as the informational opposite of 'lie' has a triple meaning, because it is not only the name of an event (structure or process) at the same time proving its real existence, but also means it is identical with the name of true structure or process it describes. Everyone knows that certain words can easily lead to loss of friends, a break of friendly relations, and maybe not always a loss of love, but it never leads to the disappearance of remorse. This is so because the beginning of each event belongs to its cause, but at the same time it is already part of its effect. Truth as an informational event resonates with human conscience.

Every man reacts to his own consciousness (which resonates with information field), sounds, signs and words of directly observed material objects and/or to the indirect energetic changes in their material form of existence. This is where moral self-evaluation lies – called human conscience, which, independent of free will, shows the congruency of man's existence with the laws of nature; and all this is directly directed to the natural Organicist law of ascending (in complexity) Self-evolvement of the universally (substantially) living world (Kosmos). Humans do not create these laws, but can only strive to understand them better in order to use them. The concept of truth is one of the natural laws, which people with the lack of understanding thereof, try to conceal in self-made laws or rules. Man is endowed with free will, which ensures a good, functioning social life, but only as long as the eternal laws of nature is followed. Precisely this is the goal of the ***World Information University*** (**WIU**) with its motto: **Do not be afraid of Truth, and Do Telic Good!** and formula: $\boldsymbol{E =^{i} mc^{2}}$, wherein "i" has basically the meaning of *Telic* Aristotelian Information, which relates essentially to the naturalist (*telic*) notions of *Hyle*, *Morphe*, and *Entelecheia.* The fundamentals for its *methodology* are the principle of

[7] Klimek, Rudolf (2014). "Threefold material-informational-energetic reality: $E =^{i} mc^{2}$", *Biocosmology – Neo-Arisotelism* Vol. 4, No. 4 (Autumn 2014), pp. 405–415.

auto-teleology of John Paul II[8], recognizing the Triadological essence of rational knowledge (see the explanation at the BCA-site – http://en.biocosmology.ru/).

References

1. *Aristotle's Nicomachean Ethics*. (2011). A New Translation – By Robert C. Bartlett and Susan D. Collins. The University of Chicago Press, Chicago and London.
2. Klimek R. (2014).Threefold material-informational-energetic reality: $E =^{i} mc^2$, *Biocosmology – Neo-Arisotelism* Vol. 4, No. 4 (Autumn 2014), pp. 405–415.
3. Klimek R. (2015). *Psychoneurocybernetic Conquest of Carcinogenesis and Cancers*. Nova Biomedical, New York.
4. Khroutski K.S., Klimek R. (2018) "Biocosmological definition of information and its naturalist causal significance," *Biocosmology-Neo-Aristotelism* 8(2), pp. 204–262.
5. Klimek R. (2016). "Life, Cancer and Virtual Information," *Biocosmology-Neo-Aristotelism*, Vol. 6, No. 2 (Spring 2016), pp. 255–272.

[8] Given in Rome, at Saint Peter's, on 14 September, the Feast of the Triumph of the Cross, in the year 1998, the twentieth of His Pontificate.

WHAT IS NATURAL AND WHAT IS NON-NATURAL IN CANCER?

Ana BAZAC[1]

ЧТО ЯВЛЯЕТСЯ В РАКЕ ЕСТЕСТВЕННЫМ, И ЧТО НЕЕСТЕСТВЕННЫМ?

Ана БАЗАК

Abstract. The point of the paper is that, between the cultural means to fight cancer – medical research and practice, as well as social measures to create a healthy environment, healthy food for all and a harmonious and trustworthy social organisation – it is also the moral education promoting the assumption of values of *the truth-the good-the beautiful* in the individual behaviour and the precedence of the *social ideal* over the individual aspirations. This involves a change in and the assumption of the dialectic of the *individual* and the *human species*/society. The ill man, and even more the cancerous person, does struggle with the disease as an individual. But in order to being serene, the cancerous person must consider himself/herself as a part of the human species.

This conclusion is developed after the description of cancer as both natural and un-natural phenomenon. The logic of the demonstration is based on Aristotle's holism and teleology – where the *telos* of the organism is more than the sum of the *teloi* of its parts (including cells) –: and since the organism and the up to down determinism cannot be overlooked, and the coherence and strength of the organism are explained not only by the functionality of its complex deep levels but also by its relations with its milieu, a humanistic culture with direct altruist values assumed by the individuals and the social ideal as the backbone of the humanity of humans is a powerful stimulus to fortify the organism and its struggle against the irreversibility.

Keywords: cancer, *telos*, measurement, precision, fragmentariness, naturality[2] and un-naturality/naturalness and un-naturalness, irreversibility, social ideal, man as species being.

[1] Romanian Committee of History and Philosophy of Science and Technology, Romanian Academy; Bucharest, ROMANIA.

[2] I used this old form – *naturality* – because for us the modern *naturalness* is too related to the human attitudes (to unaffectedness, i.e. a distancing from the artificial, the requirements of culture/civilisation, as the Italian *disinvoltura*, easiness, unconstraint). Naturalness means also the quality or state to being natural, but the old naturality – though it meant also a 'natural feeling' – seems for me to be more connected to an abstract natural character.

Contents

1. Instead of introduction
2. The “modern” view on cancer and beyond
3. Methodological presumptions of the paper
4. Methodological preamble regarding the attitude of the supporters of the integration of teleology within the scientific outlook
5. Cancer as a natural and un-natural phenomenon
   5.1. *The idea of natural character of cancer*
   5.2. *Life and* telos
   5.3. *Naturality of cancer in front of reductionism*
6. Therefore, cancer as non-natural phenomenon
7. Cancer as enemy
8. Prophylaxis of cancer
9. Instead of conclusion: how to fight cancer?

Резюме. Суть статьи заключается в том, что между культурными средствами для борьбы с раком – медицинскими исследованиями и практикой, а также социальными мерами по созданию здоровой среды, здоровой пищи для всех и гармоничной и заслуживающей доверия социальной организации – значение имеет также нравственное воспитание и содействие допущению ценностей истины–добра–красоты в индивидуальном поведении и старшинству социального идеала над индивидуальными устремлениями. Все это связано с изменением и допущением диалектики человека как вида и индивида и человеческого общества. Больной человек, и более того, пораженный раковой опухолью – борется с болезнью как индивидуум. Но для того, чтобы быть спокойным, раковый больной должен оставаться человеком и считать себя частью человеческого рода.

Этот вывод развивается после описания рака в качестве и естественного, и неестественного явления. Логика демонстрации основывается на холизме и телеологии Аристотеля – где телос (*telos)* организма больше, чем сумма *teloi* его частей (в том числе клеток) –: а так как организм и «сверху вниз»-детерминизм нельзя игнорировать, и согласованность и сила организма объясняются не только функциональностью его сложных глубоких уровней, но и его отношениями со средой, гуманистической культурой с ее прямыми альтруистическими ценностями, которые индивиды принимают, и социальным идеалом в качестве основы человечества – все это является мощным стимулом для укрепления организма и его борьбы с необратимостью тяжелого заболевания.

Ключевые слова: рак, *телос*, измерение, точность, фрагментарность, естественность и неестественность / натуральность и ненатуральность, необратимость, социальный идеал, человек как биологический вид.

Содержание

1. Вместо введения
2. «Современный» взгляд на рак и не только
3. Методологические предпосылки статьи
4. Методологическая преамбула относительно позиции сторонников интеграции телеологии в научный кругозор
5. Рак как естественное и неестественное явление
   5.1. *Идея естественного характера рака*
   5.2. *Жизнь и Телос*
   5.3. *Естественность рака в глазах редукционизма*
6. В свою очередь, рак как неестественное явление
7. Рак как враг
8. Профилактика рака
9. Вместо заключения: как бороться с раком?

1. Instead of introduction

Cancer is the most *terrifying*, mysterious and important illness of man. Though it was discovered that cancer affects not only humans, and not only animals – but all of them? – Cancer is/may be the *criterion* towards which the gravity of chronic (non-infectious? non-traumatic?) diseases is, at least subjectively, "measured". Namely, if one has no cancer but a different malfunctioning of organs, "it's OK": because something that is not cancer may be reverted and reversed (it is not irreversible like cancer), and cured with non-invasive and invasive means (not only stopped, and not only for a while); at least, this is the common perception. Therefore, the most frightening thing in cancer is its imminent *irreversibility/menace of irreversibility* and its obviousness as an *imminent* moment anterior to death. Cancer means death, while other diseases – only unpleasant episodes.

On the other hand, cancer is the *model* of the illness: a state – but a sudden, unexpected and never expected transformed state – that interrupts the sweet routine of life, a *limit situation* when someone is pushed in a brutal manner to think to the meaning of life just in a moment when he/she can no longer change the projects and course; somehow as in Tolstoy's *The Death of Ivan Ilyich* [1886]. And cancer is a model of illness because it is the most redoubtable adversary of man, being *at war* with man and forcing this one to be at war with it [Kampmark 2017].

And in this meaning of model, cancer is a *metaphor* too/bears the metaphors of irreversible bifurcation of the human existence, naturalising and privileging even the worldviews and policies [Vallis and Inayatullah 2016] which prove either the neglecting of cancerous diseases or the active intervention.

Cancer is, first, *detected* and, according to the modern Western medicine, *measured* in order to be immediately countered through medicines and radical extirpations. Anyway, the hypotheses at the beginning of the treatment must not be "arbitrary functions" – or they must be considered as just they are, arbitrary – and they must lead to *precision* (that may differ from the first expectations from around the detection) because otherwise they do not justify the treatment. However, as in the scientific research, the experience of the treatment – in fact, the patient undergoes an experiment (he/she is the subject-object of the experiment) – leads to further confirmations/refutations, adjustments of both the treatment and the *ad hoc* theory of the concrete cancer of the concrete patient.

2. The "modern" view on cancer and beyond

I use here the word placed between inverted commas to draw attention to the meaning already given by the Renaissance spirit: as mathematical correlations / in fact as *measurability* as a condition of knowledge/understanding. The study of cancer has evolved just in modernity – mostly cancer is a "modern" illness, or it hit the consciousness of people in modern times – and the physicians have passed from treating it by alleviating the suffering and, eventually, by simple extirpations to efforts to cure it: and this effort supposed to understand the level of the "infection". They have drawn up a table of successive signs and symptoms of the cancerous disease of a patient in the track of the old medical anamnesis. But the study has advanced only along with the technical devices based on mathematical translation of the states of the patient.

Therefore, cancer itself must be *measured* – and obviously, every measurement is a *relation* and emphasizes both the related elements, as well as the *ontological* levels of these elements, and the relations as such –. Thus, the measurement transposes/"translates" the states of the patient in "images" which are the analogy of these real states; all the comparisons are made through the transposition of states in simpler data (reflecting the criteria of normal and ailing states) and measured "mechanically"/in analogical way (like the general and local temperature), these simple measures giving the tableau of the real state; or, with the emergence of digitization in computer sciences, the analogies suppose an extra *decomposition* of, much more data now, in numbers, stored in numerical form and *re-composed* in signs corresponding to the real states. The measurement is always repeated, and the more it is more accurate and concerning more details – so, a more careful decomposition and re-composition – more repeated and more integrated within a creative interpretation, the more successful it is. Consequently, in this process of measurement, we witness different *ontological* levels – the inherently *holistic real* state, different inherently *fragmentary measures* (temperature etc.) as corresponding representations of different aspects of the real state, the *numbers* which are the abstract decomposition of the information gathered through fragmentary measurement, and their re-composition in more or less holistic views about the real state –; and it is important to not confound these levels: that is, *to not reduce the real state to some results of the measurement*, or to not consider the representations or the numbers as real.

At the same time, the measurement lights the specific of physicians as *methodologists*. Indeed, the professions focusing on *know-how* – as the engineer and the physician – has a distinctive quality: that to translate into practical means / that to create what in general people desire. Concerning the ends of the engineer and the physician, people know only what they want; concretely and concerning only the physician, people desire to be healthy, to reverse/turn the cancerous disease into the previous healthy process of life. And the physician transposes these desires into a *methodology* of steps, succession of steps, levels and kinds of drugs and procedures, therefore programmes of cures. All of these involve – and generate, as an appropriate basis – more general patterns of thinking using the methodology and the medical technology /the information provided only by peculiar medical technologies (and from this standpoint, indeed, the "medium is the message", as McLuhan said) without which a coherent and up-to-date system of remedies is no longer possible.

There is undoubtedly a contradiction – manifest in oncology too – between the precise mathematical data giving the limits of normalcy and the measurement of the gravity of cancer (all of these data allowing the *protocols* respecting the newest methodology) and, on the other hand, the individual character of cases. To solve this contradiction is not difficult: none of these aspects ought to cover/overwhelm the others, and patients instinctively assume the use and results of the medical apparatuses and codified reasons and rules of treatment in protocols, while at the same time desiring to be considered in a personalised manner. However, *the only condition to control this contradiction is but the exclusion of extra-medicine constraints from the medical process*.

Certainly, the "personalised" manner involves also social and cultural advices towards the patient, a larger view of the physician, that includes the understanding of the social and cultural dependence of cancer and the concrete illness of the patient, but it cannot ignore the necessity to use the data provided by the medical equipment and protocols. The more complex view (actually, the holistic view) – necessary today in tackling every phenomenon, and not only the health, health care and malady, and obviously not only cancer – supposes to transcend the direct, material constituents of the states of the human body, even the cellular and atomic and sub-atomic levels of the material constitution of these states, or rather to interpret them with the help of psychical and informational forces too and without shyness; it supposes to relate the medical and extra-medical aspects of the human life; but surely, it does not suppose the disdain towards the necessary direct correlations and measurements, which are absolutely useful for the understanding of different aspects of the disorders of the human being.

3. Methodological presumptions of the paper

Reading the information transmitted by researchers, I constructed three directions of reflections (and research) linked to the understanding and countering of cancer:

(1) The presumption that cancer is a *natural* phenomenon: and in this frame the investigation of its manifestation and functioning, its "essence" and the stressing of its naturality and un-naturality;

(2) the presumption of its harmful, even malefic character – and in this frame the analysis of *treatments* and *prophylaxis*; in fact, this direction is the most difficult, including because of the *intertwining of the inner logic of scientific approach and the logic of extra-science/logic exterior to the inner requirements of science*; anyway, this was and is the first space of the research of cancer, because it is practical and answers to practical and immediate healing problems: the development of this space has led and leads to the upstream space of theory (1) as well as to the downstream space that follows (3);

(3) the presumption of the necessity to *"compensate" cancer at the level of "trans-medical" tackling* (at the level of psychology and ethics), either because it cannot be healed and its advancement implies horribly painful feelings linked to the coming of the final moment of life, or because it is prevented by an "alternative" view about health and the human life (and death).

Therefore, the spaces of research are intertwined and at the same time have their relative autonomy. And again at the same time, these spaces involve the interlinking of both the theoretical and practical levels of the medical science/art, and its scientific and philosophical levels. This interlinking does not concern only one space, though it manifests in different degrees in each of them, and obviously in different moments of the historical research of cancer.

4. Methodological preamble regarding the attitude of the supporters of the integration of teleology within the scientific outlook

As in the Call for papers for the 14th International Symposium on Biocosmology, many researchers have felt and feel the necessity to exceed the shortcomings of the mechanistic manner of the modern science, whose emblem was the world-machine metaphor and whose belief in the absolute certainty of science because of its self-evident principles was based on the analytical method and has generated a glorious development of disciplined *fragmented* views on concrete realms and their cause-effect series. There are at least two directions proposed by researchers in order to fulfil this task: one is to do away with the equivalence of science with the predominance and independence of measurements and transformations of the inorganic/matter, and the return – obviously, in a spiral, namely the return is not a superposition of the new pattern of thinking and the ancient one, but a development of the former with the means of the new scientific acquisitions – to the image grasping the *organic* relationships of mater and spirit and the *complex and unified* characteristics of the existence: *organic*, *holistic*, *ecological* and *systemic*, in the words of Fritjof Capra [1988]; the other is, by starting from the model of the living (and not from that of the inorganic), to re-integrate *teleology* in the system of causes and explaining factors of the world (as the BCA insists). These directions converge "though" they have as "founding fathers" Aristotle and Einstein.

These directions – historical – are very important and support the continuous development of knowledge/science only if they are conceived of as historical, as all the other moments of knowledge, and with modesty/self-criticism/sense of humour. In other words, neither they can be viewed in a dogmatic manner. This problem of the dogmatic and non-dogmatic view about science comprises both the *contents paradigm* framing science in a certain moment and the scientific *methodology*. Concerning the first aspect, it is obvious that today one no longer considers Aristotle's physics as being only "words" towards Newton's science (as Kropotkin opposed them in an otherwise excellent paper, holistic and integrative of man and nature [1893]. Differently put, one is able to review and (critically) assimilate all the "old" signs of human wisdom.

Concerning the second aspect, the *organicity* and *unity* of life processes must not suppose the disdain of the "rationality"/strict logical manner to tackle these processes and problems: on the contrary, the intertwining of matter and "spirit" (not in the simple Cartesian way), the challenges rose by the research of new phenomena in a non-conventional manner have more and finer answers if the scientific methodology/the scientific rigour is observed.

The problem is not the rationality/the rational knowledge, the "too much" of them, but the lack of rationality because of the extra-science/economic, social, political logic. And the problem is that the focus on isolated systems from their environment and the "mechanistic" manner (cause-effect lines) to tackle the *real* cause-effect *network* and *canopy/tree branching* was determined by both the *inner* logic of science (the modern science was at the beginning and the scientific analysis needed, and in a way still needs, "disciplined" fragmentation and putting – as "thesis" for the scientific research – of the "simple" Aristotelian logic of the excluded third as ground of further inquiries) and the *extra-science* logic. This means that a certain pattern of thinking is *historically determined*, and we must not reduce this complex determination only to one aspect or another. As we cannot ignore the mechanistic pattern of thinking, so we cannot even overlook the economic, social and political constraints of the epoch. The ban of teleology was the result of the mentioned complex determination.

And certainly and somehow paradoxically, this prohibition is ever more strange and bigger nowadays because of the present neo-liberal mainstream rule: although the strong development of science – and just as a result of the analytical method – has led to the breaking of the former limits of disciplines, to inter and trans-disciplinary approaches.

Anyway, the prevention of teleological questions harms not only the ultimate finality of science and technology – that to provide humans the means of a *beautiful and creative life of all* – but also their inner logic. Because: the teleological questions are not (only) philosophical, but also scientific, intertwined with the classic Aristotelian questions about the material, formal, efficient causes. In any case, the tendency (the feeling) that teleology is/becomes more and more important prefigures the necessary *unity of science and philosophy*: a unity resulted from the development of the modern science, from its self-criticism/change, so from the supply of a very

complex representation of the existence, and not from the ancient unity of science and philosophy where the tableau of things was, inherently, simple. Teleology = unity of science and philosophy.

This integrated approach of the classical *causal* and the *teleological*, of the *system* we focus on in the research and desire of healing, and the *rest*, i.e. the *environment*, helps us to understand the *relative* character of dichotomies we use when we discuss the diseases; for instance, cancer is not a typical traumatic disease as the wounds directly produced by weaponry in wars, but – the more so as there are also indirectly produced illnesses, manifested as post-traumatic diseases as a result of the entire atmosphere of wars [Hagopian 2015] – it may be a non-typical traumatic disease, where not only the injuries as such and their close environment, but also the complex networks and atmosphere which have contributed to it constitute its aspects. And obviously, cancer is not a typical non-infectious civilizational disease – as the plague and smallpox were the typical infectious diseases, or the different epidemics – but it may be a non-typical even infectious civilizational disease.

5. Cancer as a natural and un-natural phenomenon

5. 1. *The idea of natural character of cancer*

A first interesting problem is that the natural character of cancer – as of all the other non-traumatic diseases – is a "modern" (philosophical and scientific) *idea*. Obviously this character/idea is *historical*, i.e. firstly people have considered the diseases as brought about by some maleficent spirits, then they/the physicians have begun to observe the manifestations and changes produces by illnesses, and certainly outlining anamneses and searching for *causes* related to and issuing from the behaviour of humans.

A first group of such causes the thinkers became conscious of was that of *excesses*: excesses of *too much*, not of too little, because the lack and malnourishment were social conditions one could only alleviate (if) but without questioning them. But both the *too little* and the *too much* have showed to humans – philosophers and physicians – that originally the natural condition of humans was the natural balance and harmony of the human body – and soul – and at least some ill states were the result of excessive, bad behaviour of people with their own beings.

Letting here aside the ideological aspect – with its conservative nostalgia – Plato was the thinker who stressed that most of diseases were the result of the *too much*: of the artificial imbalance produced on bodies – and souls – by the artificial elements of civilization; Plato has compared the "natural"[3] healthy life of the primitive Greeks with few needs in an autarchic manner satisfied in the household economy (Plato, *Republic*, 372c-d), and the affluent in artificiality life of the "modern" Greeks of every big polis: even the division of labour became artificial, the needs too, people have confounded the real needs with those imagined by the expanded dynamic of the social interdependencies (see Plato, *Republic*, 373a-d); in this type of "fevered state" (idem, 372e), the logic of trades needing the fuelling of needs in order to have demands arrives to pervert the healthy behaviours: "cookery assumes the form of

[3] It was human, thus already artificial.

medicine, and pretends to know what foods are best for the body" [Plato, *Gorgias*, 464d] and thus "cookery is flattery disguised as medicine" [idem, 465b]; as a result, "Doctors, too, are something whose services we shall be much more likely to require if we live thus than as before" (*Republic*, 373c-d).

Besides the excesses generating unhealthy imbalances, Plato and Aristotle (as well as Hippocrates) spoke about a general state of the body *and* soul: a *general* state generated naturally *from within*/from the internal constitution and treated with *both local interventions* ("expects his physician to give him a drug which will operate as an emetic on the disease, or to get rid of it by purging or the use of cautery or the knife" [*Republic*, 406d]) and *general prophylaxis* (temperance in diet, gymnastics, see music and gymnastics „not for the soul and the body except incidentally, but for the harmonious adjustment of these two principles by the proper degree of tension and relaxation of each" [idem, 411e-412a]).

In Aristotle, the theoretical construction of: – the *four causes*, – the *telos* and – the *form* that gives the essence of things (and not only the form, but also the peculiar form of an individual thing, this peculiar form being the *sunolon* [Bazac 2014, 2015]) has allowed a very modern representation of the disease; if we do not neglect some external factors which may generate changes in the functioning of the human body – and au fond, the behaviours are external, formal causes – the disease as such is a transformation *both from within*, generated by the internal act (energy/*energeia*) or constitution of the peculiar *telos* of the organism, *entelecheia* (*Metaph*.1050a), and *from without* : as a concrete form/*sunolon* – the concrete state of the organism – that pushes the organism to stay, at least for a while, in this *sunolon*, i.e. to be sick. The disease is both the result of the *telos* of the organism, i.e. the act/the becoming of the organism according to its pattern/form, and to the *efficient* causes of health or illness (diet, gymnastics, walking). So yes, the disease arises from within, but the organism is related by many links with its environment: the temperance in diet and the moral behaviour were, for Aristotle too, manners to correct the mater-energy exchange of the organism in its environment and the body-soul unity: "all potencies are either innate, like the senses, or acquired by practice"; "not only things which are inherent in an object are its causes, but also certain external things, e.g. the moving cause", "Health, disease, body; and the moving cause is the art of medicine", [*Metaph*. 1047b32-33; 1070b23-25, and 30-31].

Accordingly, the natural character of cancer consists just in its origin *from within*, i.e. in the *direct internal causes*, even though they are connected with *external indirect causes* in the environment of the organism. As a result, the *remedies* are both inside the organism, arising from its internal power to self-correct, and from within. Therefore, *all* types of causes must be searched for and analysed. But some ones neglect either the causes *from within* or those *from without*.

Concerning the internal causes, one may note: some ones see only the physical-chemical causes, but others are interested in the teleological ones *too*. The first situation illustrates the well-known "dilemma" of "mechanism" vs. "teleology"; it is in fact, a childish opposition: see the demonstration of teleology in [Bechtel and Abrahamsen, 260] *mechanisms* (as structures with functions) and *dynamics*, thus

mechanisms in real time emphasising their manifestations as cyclic organisations with oscillations, are autonomous "far from equilibrium and must maintain themselves as such or die"; and that cells as interactions between molecules/molecular structures [Pebay-Peyroula et al.] are results of dissipative/irreversible processes where the internal information is part of/helps the energy transfer *ultimately from without* [Baverstock and Rönkkö]; this external environment – both internal to the living structures (organism, from organs/ structures of cells) and external to it – comprises/consists of both material, i.e. physical and chemical structures and processes, and immaterial or informational structures and processes; both types of structures and processes bear and are moved by the *teloi* of the above material elements and structures; and by the *telos* of equilibrium within the living structure, and within the organism, thus considering their environments and exchanges also [Ames 2018]: "a modest deficiency of one of the nutrients/cofactors triggers a built-in rationing mechanism that favours the proteins needed for immediate survival and reproduction (survival proteins) while sacrificing those needed to protect against future damage (longevity proteins)").

Therefore, the *teleological* comprises the impulses and ad hoc material organisations and re-organisations moved by and constituted of all the informational elements [Baverstock 2014] and mechanisms of every mentioned material element and structure and of all of them. Thus, the teleological comprises the intertwining of the *teloi* of *different levels* (organism, organs, cells, chemical substances), including of the mind and psychic: the teleological is thus the result of n "mechanical" aspects. And again: these mechanical aspects are imbued with informational ones, nowadays deciphered; this deciphering leading to the possibility of separate treatment of information/starting from information in order to manipulating the material reactions of chemical elements (see, from 2006 on, the *genetic modification* of t-cells and their reprogramming so as they could recognise the proteins on the surface of cancerous cells and destroy them [Bonifant et al. 2016; Levine et al. 2017]; or the *genetic modification* of proteins related to anti-tumour immunologic responses [Kottke et al. 2016]; or the genetically modified/reprogrammed stem cells acting directly in living organs in order to repair them, see the works of Manuel Serrano and team [2013], or to substitute them [Cai 2013; Xuan 2018]; or the nano substances transformed into carriers selectively targeting and eliminating senescent cells, [Muñoz-Espín et al. 2018]; or preventing the maturation of protein shell that surround viruses and thus stopping their ability to be infective [Wang 2017].

And with regard to the external causes: see 1) the importance of epigenetic changes for the constitution of new adaptation of organisms (only a part of highlanders have acute mountain sickness, the other part having already integrated the new internal changes in the functioning [Meier et al. 2017), and the phenotypic plasticity, and the impact of ecological interaction on the basic biological processes [Dall 2012; Muraille 2014]; 2) [*Réformes*…2017]: the poverty led to the reduction of food, so not to mention the balanced and quality food. Are these external causes important, beyond our commonsensical experience that the material and spiritual conditions matter for the human life? Yes, they are: 3) see the model where

information and its carriers as substances specific to a pre-cell state act as *interface* between the cell and its environment [Baverstock 2011], and just this interface has the function of attractor – a tendency and landscape with a tendency – emphasising the importance of environmental conditions for the health of cells; and the fact of multiple factors (manifested concretely at immediate level) which may generate phenotypic plasticity in cancer cells [Jia et al. 2017]; while between those factors at immediate level we may find the extracellular matrix (the spaces between cells) and the substances filling it [Tian et al. 2013].

5.2. *Life and* telos

As it has long ago constituted, the understanding of life has arrived to the philosophical concepts of *conatus* – which is the internal *telos* of an organism to maintain itself as such – and the scientifically observed and experimented concepts of *internal stability* of the *internal environment* (*milieu intérieur*) through the entire *functioning* of the organism [Claude Bernard 1865, pp. 89–92, 122–130] that works at every level of the complex of living system.

Every life process is not only – as it was the well-known definition – a matter, energy, information *exchange* of the living system (organism but also living structures/cells) and its environment (therefore, this environment is also that inside the organism but exterior to the discussed living structure), and the constitution of *autonomy* of structures in this exchange process [Ruiz-Mirazo and Moreno 2004; Ruiz-Mirazo, Pereto, and Moreno 2004]: but also a *cognition* process where the three elements (matter, energy, information) move, evolve, transform, decay according to the learning/informational process and both the local and general results of this process and the role of 'observer'/'participant' of results/transformed structures in the ensemble of the living system [Miller and Torday 2017]. This idea was emphasised by Maturana [1970, pp. 26-27]: "A living system, due to its circular organization, is an inductive system and functions always in a predictive manner: what occurred once will occur again. Its organization (both genetic and otherwise) is conservative and repeats only that which works".

Therefore, there are "*purposes*" (*teloi*) and *functioning* of "entities" (molecules, cells, membranes, synapses, *organs* – as structures of molecules/ dynamical mechanisms leading to the same results in constant conditions – tissues, organism) *at every level*; all *teloi* and functioning influence each other, in a hierarchy of levels where there is *both* top-down and bottom-up determinism and influence, and having a relative autonomy. The functioning has to deal with all these, actually the functioning means the control of input-output dynamics at every level (ex. transport of ions; or perceptions [Mansell and Carey 2015]), including, in an indirect manner, the inter-influence of *teloi*.

Life is thus a multi-level multi-controlling combined mechanism or reorganisation (where functions are signalled by the biochemical level of molecules). "At each and every level, the properties of the whole allow a large degree of autonomy to the component parts" [Chapouthier 2018].

All of these are understandable in an integrative Newtonian *and* telic view; not only in a telic view, as some ones like to ignore the mechanism. But what does telic mean? It is not opposed to causation/"mechanical"/physical-chemical causation, but it is the appearance of "systems operating on the basis of a program of coded information" [E. Mary, 1965 in von Glasersfeld 1990], i.e. the feedback processes between different final causes where "the goal is neither outside the mechanism, nor does it lie in the future" (von Glasersfeld, ibidem).

At their turn, cells as attractors are stable states toward which cells tend to evolve (*telos*) / all initial states converge to (the region of convergence is basin of attraction): cells are dynamic attractors (in "young" state/proliferative; or apoptotic) important, as intermediary level, for the biochemical processes and organic processes: all telic.

Or, in other words, life is a network of *n* networks at *all the levels* of the organism, where all the living processes (telic) have an input-output "Newtonian" cause-effect type of relations; all processes are at the same time conservative, attractive/telic, and creative [Sabelli 2001]. The creative processes, and with all the triunity/intermediary states/unity of opposites [Khroutski 2010], create opposite (bifurcation cascades, in permanent feedback movements) [Sabelli, ibidem]: patterns and their transformation, diversification, complexification at all levels, imbricating in "mosaic" – "where at each and every level, the properties of the whole allow a large degree of autonomy to the component parts [Chapouthier 2018, p. 9] – create *complementary* opposites, acting in synergy (Jaros) (and even cancer does act in this way); thus these patterns are and create teleonomic systems [Jaros and Baker 1995] having telentropy – measure of the likelihood of success to reach their *telos*; the interaction of systems is a transfer of telentropy (advantageous/disadvantageous).

And: When there are "*contradictions of systemic divergence"*[Bogdanov 1921, 1980] in the organism/between the levels of control / when the integrative process does not balance or compensate the differentiation/variability / there is less complementarity than opposition: the diseases of old age and *cancer* do occur.

Cancer occurs at the level of cells, but – according to the level of health of the organism – its *telos* may counter, at least for a while, the process at the lowest level (the fact that for a while one does not perceive the signals of disease is significant). Thus, cancer occurs when the feedback loops do no longer preserve the stability, plasticity, and robustness of the organism.

Cancer occurs when the organisation/re-organisation, thus adaptation and learning, thus *autopoiesis* [Maturana 2002], face disturbing (repeated) processes of disadvantageous transfer of *telentropy* (from the cancerous cell(s) toward the rest of the organism). The bio-field resulted and manifested as matter-energy-information bio-complexity (bioelectrodynamic and bioelectromagnetic changes).

Cancer occurs when the biochemical reactions inside cells communicating with other cells and the networks of intercellular reactions generate heterogeneity and differentiation which respond to noise/information from harmful tendencies (see Koseska and Bastiaens). We must not forget: cancer is a cognitive process, as life is.

Cancer occurs as a *shift* in cells [Chu, Lee, and Cho 2015] but as a result of combined environmental stress.

Cancer occurs at local level – breaking the healthy autonomy of structures and constituting as a new autonomy – but it is the enemy of the whole organism.

Death happens when the whole organism is defeated by cancer.

When life is tired to unfold, cancer is a new life, but parasitic.

5.3. *Naturality of cancer in front of reductionism*

Thus, the first space opens the questioning of the *naturality* as such of the biological states. Is it the result of "simple" *functioning* "or" is it a *purpose* of the living being (and man, since we are interested here only about the humans)? May naturality be equated with "*normality*", and may normality be defined only in terms of physiology? Can we analyse naturality only in philosophical terms, i.e. with the concepts and meanings advanced by some philosophies/philosophical schools, "or" do we have to interpret these concepts and meanings from the standpoint of/with the processes emphasised by science? What is more useful for philosophy, and for science: to stay within the paradigm framework of a certain philosophy, "or" to simply use this framework as a supplementary means to falsify the medical doctrines/ better, to show the *limits* of the paradigm within which both the medical and philosophical explanations takes place?

a) For example, is it enough today to oppose the "mechanic" physical-chemical explanations and the teleological ones (or to consider, as Kant did, that neither the latter are excluded because the living would not be the simple result of the fundamental forces of nature)? Would these forces be only material, viz. physical-chemical? Is today enough to transpose the difficulty of *holistic* functioning of matter-energy-information in nature as an *epistemological* problem/problem of means of knowledge: therefore, to transpose the real, the problems at the level of the *ontos* (not of ontology) into the realm of concepts posed by reason because our practical relation to the world requires a unified integral object (as Kant said)? Is the informational necessarily of telic nature, and would the *telos* at the level of cells and organs (I use the concept of organs as in Ukhtomsky: "any transient combination of forces that can attain a specific result can be an organ" [Ilyukhina, 84]) be stronger – and how – than the *telos* at the level or organism? Aristotle said that the *telos* of the organism is that which commands to the *telos* of the inferior levels, but in the light of the present science, of cell and molecular biology for example, would it not be rather a dialectical *intertwining* of *teloi*, including as the stronger influence of the different *teloi* of the cell (*telos* of the healthy cell, *telos* of the cancerous one [Miller and Torday 2017] – leading to the inevitable death of the organism? But is this metaphorically expressed (*telos*) process not constituted by *n* processes at molecular and cell levels designing a "simple" pattern of transfers and transformations when states of "more or less" generate new compensating states and transformations [Ames 2018] in an interesting coexistence and mutual reinforcing of hierarchical and heterarchical relations? And does this metaphor of *telos* not represent the tendency to

self-formation and stabilisation of the complex system of organism, with all its specific *teloi*?

b) The philosophical problems are sketching a complicated tableau: thus, though the naturalness of human living organisms is determined only by natural causes, these causes cannot be reduced to the most basic ones, the physics-chemistry of cells. In other words, may we understand the naturality, or even normality, of the human organism only in terms of physical laws and chemical reactions at the level of cells, or do we must conceive of not only the biological integrating processes of the organism but also the bio-psycho relationships and integration of the organism and its environment? Or do we must consider that the unity of levels of the living organism (and, larger, of the existence as such) / the completeness / totality of the object (so, which must be integral) would be determined only by the tools of our reason lain under the sign of the practical (as Kant seemed to advance as one part of the antinomy he raised)?

Therefore, if the natural causality of /within the living organisms is *complex and/but explainable in natural terms* – something which was not yet during Kant's time – and on the other hand the ideas of the reflexive judgement/intellect faculty of man (as purposefulness) are only regulatory and not reflections of the real objective states as the determinative faculty of judgement arrives at, we must think the naturality of the biological states neither as reducible to bottom up mechanical relations nor as a simple normativity introduced by the reason of medical doctors and researchers, but as Aristotle conceived of, as a state/"situation" of the whole organism felt and judged *from the standpoint of the subject*/the human as such [Spassov 1998], therefore the individual. There certainly are *parameters* – and, medically, protocols for grading "evidence of correlations as a means to establish causal claims in medicine and public health" [Dragulinescu, Parkkinen and Williamson] – which may measure, from without, the gradients of the functioning of the organism and its different organs, but actually naturalness is felt by the human that is the "animal which can individuate itself only in the midst of society" [Marx, 1857].

c) On the one hand, the naturality is *felt* and after, is *thought*: consequently, it is both subjective and objective, both considered from within and from without. On the other hand, naturalness is somehow tantamount to the *good*/useful/valuable – and this is the Aristotelian/ancient basis of the treatment of diseases – and thus, to the *normal* state of the functioning of the organism and organs of the individual and, ultimately, felt as such by it. This normalcy of functioning depends, on its turn, on concrete conditions, and relevant situations of normalcy send to a larger picture of what is natural/normal/good from the standpoint of health than that supplied by a statistical analysis [Casini 2017]. Rather, from this point of view is more useful a large strand, punctuated by precise tees but offering space for objective and subjective variables: as Poincaré [1909] has showed, not everything is measurable, but only detectable.

In our Aristotelian terms, the finality of the organism arises *from within* and concerns the *whole* of that being. This Aristotelian viewpoint is all the more important as the humans are helped in order to be healthy by artificial means,

including artificial organs/functions. The whole individual may have different prostheses or organs in order to substitute the deficient or already inexistent functions. But he/she may feel good, even very good, because of the restored functions and the psychical integration, feeling and image of the self.

The end of a cancerous person is to fight cancer, to resist and to overcome it, even if for a while. The end of the medical personnel working with cancer is to help the cancerous person in his/her struggle. This situation is a *model* for all ill persons and doctors and nurses, and it is the only cause that legitimates the medical institution as such. Actually, the tackling of cancer highlights the truth (and the mutual human necessity) to consider each human being first as an *end* – therefore, assuming its morally acceptable end to fight for life, and for certain for a decent one – and only then as a *means*. Kant's *categorical imperative* forbids to considering cancer first as a means, or to considering the cancerous persons as a means for obtaining more money or for the parade of philanthropy.

To find out that one has cancer means to see the imminent death – that until this moment seemed improbable/far away, though everyone knows that he/she will die. But after the dramatic moment, the cancerous person is still the unique subject, the unique being whose death, and untimely death, is an *irreparable loss for him, the loved ones and the human species*. Once more, to help the preservation of humanity in the cancerous person – and this means of the human species in that person – is not a useless effort, "since anyway he/she will die", but one with a high human meaning.

As a result, all the activities which consciously lead to the destruction of humanity and of the human persons – and even consciously to the development of cancers [Vltchek 2017] – appear once more as *immoral*: as if they were done by alien adversaries of the human species (see only Burtscher-Schaden, Clausing, Robinson [2017]).

d) If cancer is a *natural phenomenon* related to the impact of external facts on the healthy cell or to the internal decay of this one as a result of a complex holistic aging (of the organism, see again Bogdanov [1921, 1980], if it is a complex of disordered behaviours of cells (unlimited multiplication, premature death or too long lasting, even autophagy [Ohsumi 2001]) it is at the same time an *un-natural state*. From an *ontological* point of view: for the human being the *criterion* of naturalness is *life*, so *health* as the *sine qua non* condition of life, how finite it may be, and as a main *condition of human creation and development of meanings by humans*; consequently, a so dire disease – and as the antechamber of death – is not /is not seen as a manageable disorder leaving some room for cultural creation (culture is the *differentia specifica* of man) as a process of life: on the contrary, "cancer is not natural", cancer is an un-natural *obstacle*, not an inanimate thing but a monstrous, deviant living, a living that destroys the normal living. Once more, the healthy human life is the *normalcy* because *only a relatively healthy human being is able to construct meanings and worlds*. By eating the human life, cancer is a parasite: which, as every parasite, dies when the suffocated organism dies.

e) But more: cancer is the questioning of the telic character of the human organism. The leading *telos* is that of the whole organism (Aristotle) and – since this

means the subordination of the *teloi* of the parts to the *telos* of the whole because, as Kant has explained in the *Critique of Judgment*, the natural (and not created by humans) things are those which are *organised* beings and, each of them, have their natural purposiveness where every part is reciprocally end and means, therefore intertwining so that "nothing is gratuitous, purposeless, or to be attributed to a blind natural mechanism" [Kant 1987, p. 255], and seeming to reflect the laws of necessity: that "nothing in such a creature is *gratuitous*" and "*nothing happens by chance*" [ibidem, p. 256] – the parts must not have their own/independent anti-holistic ends.

Therefore, how could cells overthrow the harmonic functioning of organs and organism, only this harmony realising the *telos* of the organism? Kant suggested, in the 18th century, that the harmony of the organism leads our reason to think that it would be the result of a natural purposiveness, but this is only an idea, a unity of representation of the different material/"mechanical'/natural intertwining of organs; but at the same time, said Kant, if one arrives to see the deep *telos* behind the natural processes, one must no longer think that they would depend both on natural mechanisms and natural teleology; because even the most evident mechanical processes/"blind mechanism" represent the relationships inside the organism as a whole: and "everything in such a body must be regarded as organized; and everything, in a certain relation to the thing itself, is also an organ in turn" [ibidem, p. 257].

Certainly, Kant's image was anterior to the discovery of cells which, in cancer, seem or even *do not care about the surviving and integrity of the organism*. And he forged a theory that, first, seems un-dialectical (that teleology would exclude the "mechanical" relationships), but when one think more one grasps a beautiful dialectic. Everything is "an organ", i.e. depending on the logic of the whole organism, or having its reason to be according to the whole organism. No organ may develop alone. But – and respecting the level of biological knowledge of the 18th century – we can imagine problems which accord with this dialectic. For example, an organ may grow in a deviated manner (for example the spine may have scoliosis), being even harmful to the organism. Nevertheless, this deviated organ may accommodate in the organism, or the organism may accustom to the deviated organ, however unpleasant and even painful is this to it. Or, a leg may be cut, but the organism survives. What is the most important is the preservation of the organism. Or, if we have in view healthy organs: all of these, deviated or healthy, must keep the organism as long as this one has its vital forces.

The natural processes in a living organism have their "mechanical" causes: the material etc. pointed by Aristotle and related to every process. But all these causes occur because all of them exist because of the *telos* of the organism.

Nowadays, this teleology is not belied by the development of cellular biology, molecular biology, biochemistry, and biophysics. These disciplines have showed only, I think, that there are *teloi* of cells etc., that these *teloi* are the result of the informational process that occurs at every level, and that there is a complex *intersection* of all the *teloi*. How does this intersection generate the *telos* of the organism – that ought to be outlined in the brain through different types of

informational processes which are stirred here – is yet to be investigated. But just the neuro-physiological research has showed that there is a strong *bottom up* determinism that correlates the parts in a coherent whole and counters the possible tendencies of deviation of different parts.

Cancer arrives – irrespective of its causes/I do not speak about its causes, and nor about the molecular and quanta, informational levels – at the level of cells. They seem to "forget" the previous normal pattern of functioning, and *normal even with bad inputs*. A new law of functioning appears. But, and obviously according to the general level of health / to the damages brought about by age and different illnesses, the organism counter a while the localised cancer. It even may offer a state of well-being. The *telos* of the organism – but certainly, this means that the body is subordinated to the mind, to the will to live/*conatus* at the level of consciousness, and all the forces of consciousness, all the stimuli are impulses consciously created by the human consciousness – is stronger than the new *telos* of cancer, and thus of the damaged *telos* of cells.

But then (and perhaps without treatment, or the proper treatment): the big *telos* of the organism losses the battle.

6. Therefore, cancer as non-natural phenomenon

If cancer is a natural phenomenon from the viewpoint of *life processes*, it is un-natural from the standpoint of *humans*. It is un-natural from a *cultural* point of view (culture is the specific difference of man).

Cancer is un-natural *for humans*, and its prophylaxis consists in re-arriving to natural conditions of the human life: but not to go back to a primitive "golden age", but forward, through a humanistic approach.

Since cancer is a new "life", parasiting the original / normal / natural one, it has its own *telos* (its own "form"). It opposes to the *telos* of the now de-formed organ, and to the *telos* of the organism: but this does not mean to reduce the problem of cancer to local reparations, because it is the enemy of the organism (somehow of the universe), and not only of local organs.

Therefore, fighting cancer, the focus on the internal local points must be completed with the focus on the organism-environment system (change of matter-energy-information in multi-layers organism-environment system). And although the causes of carcinogenic disorder/difference/variability/non-viability may be stored in the memory of cells, this genetic presence is in its turn a possible, not mandatory, cause of cancer; using Aristotle's concepts, the most probable causes of cancer are the *actual* ones.

7. Cancer as enemy

Cancer is terrifying because it is – at least for the general public and for the ill persons – something which is *not understandable*: not entering the scheme about diseases people have as a result of education and experience. And since it is not understandable, cancer *cannot be controlled*: it cannot, not only with the pills and

injections, or with definitively repairing surgery, people are used to, but not even with difficult surgery and radiation.

The control of a disease means to heal it: and ultimately, even with a little – only little – loss of the integral organism. In a unanimous view, one may lose one tooth, in the worst case a kidney, but not an eye or a leg. In other words, to heal a disease means to regain one's former *routine of life* and even one's *joy of life*. But cancer is the *extreme illness*: not only because it is not curable – or not for good and all curable –, not only because the treatment period is long, painful and full of incertitude, but also because it *destroys the routine of life and the joy of life in a decisive manner*.

And, cancer is the most terrifying because the spectre of its *irreversibility* is haunting the ill person and its loved ones. *The incidence of the absolute number of cancers has increased in most of countries*, irrespective of the decrease in incidence rates for some cancers because of early prevention and treatment. The modern lifestyle did not limit the number of cancers, just on the contrary: there is, indeed, a shift "from cancers related to poverty and infections to cancers associated with lifestyles more typical of industrialized countries" [Latest global cancer data, 2018]. Therefore, the most important challenge – for doctors and researchers – is the *quest of principles and "mechanisms" of reversibility*. And in principle, it is possible: with high tech interventions [de Grey 2010].

Therefore, neither the medical research did yet arrive to the understanding of these principles and mechanisms. For my part, I only question if the *how* and the *why* followed by researchers is *public for all* the medical institutions and doctors. And: *are all the new information a public/a common good*? Are there no people who die before time because the last medical methods are not available to them?

But, since cancer is the result of the whole way of living, with all the external influences on the human organism (and mind/including mind), it is not superfluous to mention that, though the illness depends on the internal dispositions and processes of the organism and thus the individual way of life is not the only source of falling sick, the *prophylaxis involves all the conditions of life*: alimentation (with the present advertising for different sorts of ersatz and poisoned products), water, air, noise, war, fear, alienation. *The care for life is a medicine against cancer*. And the medical treatment of cancer is both *holistic* and *focused*, highly technologically: but nowadays it is subordinated to the market relations, not only to the *telos* of the medical profession.

8. Prophylaxis of cancer

Since cancer is a *total* illness – involving all the aspects of a localised and generalised disease – its prophylaxis must be global too. In general, this prophylaxis is tantamount to the keeping of a *healthy lifestyle*. But what does a healthy lifestyle mean?

Let's put first the *physiological* condition (the well-known precepts):

- To not smoking,
- not drinking (too much)

- to eating many fruits and vegetables, less meat (fish and chicken), natural juices and teas, not milk but buttermilk, grains and germs, not (white) bread, etc.
- permanent use of internal purifications
- gymnastics/physical exercises"
- But we meet pieces of advice recommending to *not eat bought yoghurt, but to prepare at home cow cheese and yoghurt, and cultivate in one's own kale yard the vegetables / or "buy 'ecologic'"*.
- And at the same time, we are overwhelmed with *advertising for margarine and other products already scientifically proven to being harmful*. Is this not a conscious coming down with harmful information? (the notion *informatonosis* has been researched from 1999 on by Rudolf Klimek and team [Jasiczek, Klimek, Tadeusiewicz 2013].

Who has the *time* and *money* to focus on this preventive life, since the daily schedule is related to a focus on (creative) work, social relations and help? Besides the habit to have a healthy lifestyle, this style needs help at least from the family members (in a familial "division of labour").

Is it enough? And *are all of these materially possible for all?* Physiology means healthy physiology, but it is related to *other* human needs (in the well-known Maslow pyramid). Thus a healthy lifestyle comprises also the *psychological* condition. A good psychological condition is a *balanced* one (in order the human to feel good in his/her own skin, let's remember the ancient stoic *oikeiosis*). Put in a *negative* form, the balanced psychological condition means:

- *To not fear that you cannot afford eating what is necessary to a decent healthy life;*
- *To not fear that you cannot afford paying your bills related to the everyday obligations;*
- *To not fear that you cannot afford a family and raising children (and raising them in a healthy – natural and social – environment);*
- *To not fear that you are lied by those who decide your life (to not fear that you have only formal freedom);*
- *To not fear the obstacles preventing you to having a decent life are permanent (to not fear the violence of the surrounding milieu and to not be violent);*
- *To not fear that you cannot manifest your creative powers and that you will be obliged "by the life/destiny" to spend the lifetime in humdrum/absurd/harmful for people/infamous activities* [McKone 2013; Furedi 2006].

Put in a *positive* form, a healthy lifestyle/psychological condition means:

- *To be aware of one's own actions, motives and subjective conditions* (Brăzdău 2013);

- *To be aware of the results of one's own action: both on short and long term, and both concerning the individual and his loved ones and the other fellow humans, including those far away from the individual's circle*;
- *To be aware of the external conditions of one's own actions, motives and results*;
- *To be aware of the interdependence of one's own survival and the survival of other fellow humans, including those far away from the individual's circle*;
- *To be aware of the interdependence of one's own well-being and the well-being of other fellow humans, including those far away from the individual's circle*;
- *To be aware of the insufficiency of the individual goals, and to be aware of the existential human need of a* social ideal [(something what Maslow conceived of as *self-transcendence*); but this *social ideal* means: 1) to transcend one's own egotism; and it is not the belief in religious transcendence; 2) the social ideal is more than a certain social goal, such as the simple and isolated anti-war sentiment; 3) to be aware of the necessity of *self*-transcendence**]**; all of these sending to the old cardinal importance of the human *reason* and *responsibility*;
- And to *be aware of the consequences of different social ideals (to anticipate).*

Consequently, a healthy lifestyle means also a *social* condition:

- *To be sensitive to other humans, including to those far away from us, not only to need one's own belongingness to different groups* (psychologically, this aspect is the *empathy*, or in the old word, *sympathy*);
- *To recognise the humanity of others, irrespective of their distance from us/from the groups we belong to*;
- *To may put/imagine oneself in the concrete condition of others, irrespective of their distance from us/from the groups we belong to*.

May we ignore the *managing* condition implied in a healthy lifestyle?

- *To master/control oneself* (this is the ancient *sophrosyne*);
- *To deliberate* (since *awareness supposes deliberation*);
- *To have a reasonable speed of decision*;
- *To have a reasonable speed of action*;
- *To will things reasonable and fuelled by the social ideal*;
- *To dare to act in a consistent manner for these things*.

All of these are the ancient virtues, revisited in our modern times [Bazac 2017; Galtung 2017]. But we can add new modern concepts as

- *Dignity* (in Maslow, this corresponds to the *recognition* by others – part of *belonging*; but dignity is more than recognition, it is esteem by others);

- *To adapt* (that is not tantamount to simple conformism, but to self-judging).

Methodological warnings: 1) all features intertwine and every one of them supposes all the other ones (as the calculative *intellect* cannot be separated from *reason*); 2) the reaction and the purpose are intertwined in the functioning of each and all levels of the living organism; 3) therefore, the healthy life is not reducible – as some ones think – to physiology and simple abundance concerning the material needs; 4) therefore, the will to have an *individual* healthy lifestyle with preventive virtues is not enough; 5) and the external, social *conditions* have the same importance as the individual will.

The organism's *entelecheia* is related to different external *entelecheia*.

9. Instead of conclusion: how to fight cancer?

Accordingly to the above elements, the humans have to fight cancer when it is not, and not only when it is. And the first requirement of this battle is that of the consciousness of the inherent/inevitable/"natural" dialectical existence of the human individual as both finite *individual* and *participant to the constituting of the human species*, i.e. *bearer of humanity* and *responsible for the humanity of the species*.

The humans are moving living beings which, in the processes of perception and operation (including reaction), give *meanings* to meaningless objects and then live according to the surrounding objects/space/more comprising environment which are meanings-carriers. Neither the objects – as well as the other humans – are neutral after their relations with humans and nor the meanings are objective, unilateral and given once for all. And since the humans born in already existent societies, thus complexes of meanings, they are not only meaning-constructors but also meaning-receivers. But, in contradistinction to the animals [von Uexküll 1982], the reception and construction of meanings by humans are *socially* mediated, and at much lesser extent instinctually. People connect to each other through the sharing and confronting of meanings. These meanings get the form of *values* too, having the strongest force towards all meanings, obviously stronger than the simple animal instincts, since even the force and promotion of these instincts in humans need the values legitimising them in order to manifest. Well, the most important values are those forming the ancient triptych: *the truth-the good-the beautiful* as the meaning of the human life. Though philosophers have separated these values from the problem of the meaning of life – discussing only their logic, epistemology or aesthetical importance –, in the last instance just their unity giving the meaning of life explains all their meanings and depth.

Further, people judge and prefer some values in accordance with the dominant ideas from a society. These dominant ideas – as all the ideas about society – are socially framed, reflecting, more than the complexity of the power relations as relations of forces within a society, the interests of the ruling strata. Since ideology is the characterisation of ideas as reflecting social positions, within the power relations, people judge ideologically. Thus, the meanings are not pure individual constructs, but *ideas* created with the ideologically coloured *concepts* of *society*.

Well, the routine of life means that people do not have time to think to the *meanings* of life and the *distant* consequences of facts, but rather to the immediate observations, tasks and correlations. But cancer – as the old age – leads to the preoccupation for the *significances* of thoughts, attitudes, decisions and results in particular moments but also in the whole life until then.

This is when and just because people confront the problem of *irreversibility*. Generally, this problem – and related not only to death but to the reactions and actions of the human beings – was not had in view, neither by philosophy and nor by the pragmatic domains. Nevertheless, the understanding of irreversibility as a landmark of the human life is imperious for the (ethical) education of the general public concerning irreversibility.

Yes, people know that their life in the *present* unique form on Earth is finite. Over time, they have imagined different manners and forms of their *individual* continuity after death. This was a solace for them and the importance of deities arose not only from the imagined omnipotence of these ones concerning the earthy life and destiny, but also from the function of guaranteeing the individual life after death. This life was to be that of the individual soul, the hoard amassing all the ideas and feelings the humans thought as giving them their worth and, again, their uniqueness. But what does it happen when people have matured enough so as to understand that the deities are only comforting ideas? Heidegger said that the fact of knowing that they will die puts people in the situation to live only in the present individual horizon. They certainly care about their dear ones and about the surrounding milieu conditioning their individual life, but that's all. They are beings-toward-death, there is no alternative for this, and the entire humanity of the humans consists of their little *everyday care* and *anxiety*: concerning the inevitable death and the appearance of uselessness of their life and efforts, countered only by the ideas which will not die only if they materialise in books or artworks or technology. However, these creations are exterior to humans and determine them from without and in an inexorable way: and do not even counter their death. The moral of this view – but, as we know very well, Heidegger did not deal with morality – was a deep pessimism, a profound sense of hopelessness of the human life. Man has appeared on Earth by accident, the individuals are mortal, and the meanings given by them during their finite life vanish. *Not the content of life was determinant for Heidegger, but death as proof of finitude*.

Before Heidegger, Nietzsche has considered that nevertheless there is a hope: the moral transformation of society, and its members. If so, well, but with what result, or why would be this transformation so valuable? The individuals are still mortal, are they? Or this has to do with the *joy of life*, mentioned by Bergson but not strange to Nietzsche?

The job of doctors is to prolonging the life of individuals and to healing them in order to taste this *joy of life*. But since the denouement is known – the more so in cancer – and the joy of life so ephemeral, what is the sense of their effort?

The joy of life is unique for every individual. But it does not concern only individual feelings and scopes. The (certainly, historical) limit of Heidegger was his incapacity to confront and understand the *dialectic* of the *human individual* and the

human species. (And the human individual is a *species being* because "*he makes the fate and fortune of the entire species his object*" [Margolis 1992, p. 332]). The course of the individual life is irreversible. But the species is living; and develops with the contribution of the life of every individual. As the individual may develop only in the midst of society – as Marx said – as the species survives only through the catena of individuals who live.

But only life is not enough. Life needs *content* (rich human relationships, creation, love, mutual help, generosity, solidarity), and the richer is the content the richer is the human life as such. *The human species survives only when the content of the life of its individuals is rich*.

The process of enrichment of the content of life supposes, obviously, rich experiences. Medicine helps this process. It helps to preserve such a healthy organism that humans may taste and create meanings which enrich the others and support their joy of life. The human intelligence consists in the capacity to make correlations and understand the *why*, as Aristotle's causal approach has substantiated this. (But see a present analysis of the models and graphical tools of the causal reasoning [Pearl 2018]). But this capacity depends on *what* one puts in relation. If the meanings put in correlations are scanty – as in the phase of decrepitude, when the meanings of life are narrowing – the human intelligence can no longer moving forward. Briefly, the cardinal meanings which condition the rich and beautiful content of life are the *good behaviour/well-doing* so as to become, after death, a bed of "humus" for the memory and deeds of those remained, and the *assumption of a social ideal*.

The ill man, and even more the cancerous person, struggle with the disease as an individual. He/she focuses only on his/her state and struggle. This situation – when he/she neglects the others (letting aside the loved ones, others are important only as aid for him/her), or more exactly brings out the others/concretely, the *koinonia* (Aristotle), the human community/society from his/her universe of thoughts – does not help him/her. On the contrary, it impoverishes, weakens him/her.

Consequently, and this is my point, all humans, and including the ill persons, are, and must consider themselves, as *parts of the species*. Every individual is a mirror of the species, showing its stage, triumphs and weaknesses, but thus the individual must not only expect from the species/from the others, but also must mind the species. The care for the species and society, the altruistic preoccupations, must be permanent, including – and even *especially* – during illnesses. Feuerbach said that God signifies also the human community with which the believer talks, disputes and which it begs and puts his full hope within. Thus, God is an intermediary. The present cancerous persons who pray and are advised to pray are not only reduced to the relationship only with this intermediary, but also to the impoverished self-image of being only an individual. They are not taught that they are also members of the human species. And as a result, they are alone and frightened in front of death. They "know" that their death is definitive, even though they hope to live forever in the world of spirits allowed by God.

But if people consider themselves as members of the human species, they are more peaceful (somehow as the old Dacians considered death as the gateway toward

eternal life): they know that they do not/will not fully die: they *will survive as/within the human community*. And, the more they were preoccupied for its issues, the more they fought the factors limiting the humanity of *all the human persons*, the more they feel as future survivors.

The means to attain this view is the altruistic and disinterested behaviour *towards the encountered people*. This is the first proof of benignity assuring that you have chosen the right way in your life.

And the means to attain this view is the *social ideal*, the altruistic wish related – more than to the individual well-being or happiness – to the creative development of *all* human beings. The social ideal synthesises and gives the ultimate purpose of the human existence: as all the great religious reformers and philosophers have searched for, but did not arrive to it (Actually, the proof of this fact is Nietzsche's conclusion of *eternal return* showing that *there is no end or aspiration to an end* in the cyclical movement manifested in this model of answers to the meaning of life in all the religious and secular worldviews specific to the societies based on the ruptures between the individual and society). To have as a beacon the social ideal follows Aristotle's thoughts that *justice* is the best or even the whole of Virtue because it means to practice virtue "towards others", not towards oneself (*N.E.*, 1130a). And that: the most important goal of the rulers is to govern with justice, and if "it is the duty of the law-giver to make the whole city happy", "happiness cannot belong to the whole and not to its parts" (*Pol*. II, 1264b). Therefore, if the individual ideal is the individual happiness – and every man aspires to it, but (Aristotle) it's more valuable and more difficult to assure and support the happiness of the community, and this means of every part of it, in other words, every man must be able to, as Pindar (3. 62-63), the lyric poet said before Aristotle, ("Do not crave immortal life, my soul, but) *use to the full the resources of what is possible*" (my emphasis) – the social ideal is the active factor aiming to assure such social relationships so that every human being may use up the field of the possible. *Every human being must have a rich and soul-uplifting content of life.*

In fact, the reduction of behaviour – and accordingly, of the human horizons – to the kindliness towards the encountered people (the close ones and the randomly encountered ones) is not enough: the proof is the coexistence of interpersonal love and kindliness with depression and loss of the sense of life, but the reason is that the meanings given by humans to their life, these meanings generating different rhythms of life, reflect *the perception they have about their engagement into short or long term processes*. Their commitment into short term processes/short/truncated amplitude processes seems to them not enough. The balanced behaviour and *optimism*, a sine qua non condition of the human life (and illnesses), depends just on the amplitude and long term processes the humans are involved and act within.

To have as a permanent *priority* the social ideal allows both the enrichment of the *content* of life and *resources to fight the suffering of a final illness*. The solution I see is to transform every ill person in a fighter not only for one's own health, but also for social justice and bright future of humanity. To surpass the generalised model of selfish individual may be a strong compensatory factor of the shock and suffering of

illness. But to do this is a difficult educative and transformative process. Philosophy has helped – from Aristotle's activism to Kant's categorical imperative – and still helps; actually, it is the main basis and support of this process. The well-known intentionality of the consciousness (Husserl) becomes the living in an intentional manner ("living intentionally"), conscious of and aiming at a meaningful life [Lindstrom 2016].

Therefore, to fight cancer involves a change in the education of society. A new worldview where the social ideal is the backbone, and death means only to re-melting in the Big Whole of the universe is related to a rich content of life: and the regret of the dying is not as excruciating as when his/her life and unique source of creativity were wasted.

Doctors are a part of the educators of society. In fact, all humans are – and in chief must become – educators, conscious beings about the ends and stakes of their activity and life, but doctors may be more active and concerned with the education of patients as "militants" until their last bit of the heart.

To fight cancer is a very *un-natural* phenomenon: it is *cultural*, of course. But the content of culture is the *responsibility* of humans.

References

Ames, Bruce N. (2018). "Prolonging healthy aging: Longevity vitamins and proteins", *PNAS*, published ahead of print October 15, 2018 https://doi.org/10.1073/pnas.1809045115.

Aristotle. (1989). *Metaphysics*, in *Aristotle in 23 Volumes*, Vols.17, 18, translated by Hugh Tredennick (1933), Cambridge, MA, Harvard University Press; London, William Heinemann Ltd.

Aristotle. (1934). *Nichomachean Ethics*, in *Aristotle in 23 Volumes*, Vol. 19, translated by H. Rackham. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd.

Aristotle. (1944). *Politics*, in *Aristotle in 23 Volumes*, Vol. 21, translated by H. Rackham. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd.

Baverstock, Keith. (2011). "A comparison of two cell regulatory models entailing high dimensional attractors representing phenotype", *Progress in Biophysics and Molecular Biology*, Aug., 106(2):443-9. doi: 10.1016/j.pbiomolbio.2011.01.002. Epub Jan 31.

Baverstock, Keith. (2013). "The role of information in cell regulation", *Progress in Biophysics and Molecular Biology*, 111 (2-3), pp. 141–143.

Baverstock, Keith and Mauno Rönkkö. (2014). "The evolutionary origin of form and function", *Journal of Physiology*, Jun 1; 592(Pt 11): 2261–2265. Published online 2014, May 30. doi: 10.1113/jphysiol.2014.271775.

Bazac, Ana. (2014). "Fidelity towards forms: an ontological approach" I, *Agathos: An International Review of the Humanities and Social Sciences*, Volume 5, issue

2, 2014, pp. 52–62, and "Fidelity towards forms: an ontological approach", II, *Agathos: An International Review of the Humanities and Social Sciences*, Volume 6, Issue 1, 2015, pp. 24–40.

Bazac, Ana. (2017). "Aristotle, the names of vices and virtues: what is the criterion of quantitative evaluation of the moral behaviour?", *Dialogue and Universalism*, Volume 27, Issue 4, 2017, Values and Ideals. Theory and Practice: Part V, 175−188.

Bechtel, William and Adele Abrahamsen. (2011). "Complex Biological Mechanisms: Cyclic, Oscillatory, and Autonomous", pp. 257–285, in *Handbook of the Philosophy of Science. Volume 10: Philosophy of Complex Systems*,Volume editor: Cliff Hooker, Amsterdam, Elsevier.

Bernard, Claude. *Introduction à l'étude de la médecine expérimentale*, Paris, Baillière et Fils, 1865.

Bogdanov, Alexandr. (1980). *Essays in Tektology* (1921), Translated by George Gorelik, Seaside, Ca., Intersystems Publications.

Bonifant Challice L.; Hollie J. Jackson, Renier J. Brentjens, Kevin J. Curan. (2016). "Toxicity and management in CAR T-cell therapy", *Molecular Therapy Oncolythics*, vol. 3.

Brăzdău, Ovidiu. (2013). "The Consciousness Quotient': introducing the consciousness experience as a research variable in psychological assessment", http://www.consciousness-quotient.com/wp-content/uploads/2013/03/Consciousness-Quotient-Ovidiu-Brazdau-TSC-2013-Talk-on-CQ_2.pdf.

Burtscher-Schaden, Helmut; Peter Clausing, and Claire Robinson. (2017). *Glyphosate and cancer: Buying science (How industry strategized (and regulators colluded) in an attempt to save the world's most widely used herbicide from a ban)*, Vienna, Global 2000, Glyphosate_and_cancer_Buying_science_EN_0pdf.

Cai, Jinglei et. al. (2013). "Generation of tooth-like structures from integration-free human urine induced pluripotent stem cells", *Cell Regeneration*, 2:6, https://doi.org/10.1186/2045-9769-2-6.

Capra, Frijof. (1988). *The Turning Point* (1882), New York, Bantam Books.

Casini, Lorenzo. (2017). "Malfunctions and teleology: On the (dim) chances of statistical accounts of functions", *European Journal of the Philosophy of Science*, 7, pp. 319–335.

Chapouthier, Georges. (2018). *The Mosaic Theory of Natural Complexity: A Scientific and Philosophical Approach*, Paris, EMSHA Éditions.

Chu, H.; Lee, D., Cho, Kh. (2015). "Precritical State Transition Dynamics in the Attractor Landscape of a Molecular Interaction Network Underlying Colorectal Tumorigenesis", *PloS One*, Oct 6;10(10):e0140172. doi: 10.1371/journal.pone.0140172. eCollection 2015.

Dall, Sasha R.X.; Alison M. Bell, Daniel I. Bolnick, Francis L. W. Ratnieks. (2012). An evolutionary ecology of individual differences, *Ecology Letters*, https://doi.org/10.1111/j.1461-0248.2012.01846.x.

de Grey, Aubrey, with Michael Rae. (2008). *Ending Aging: The Rejuvenation Breakthroughs That Could Reverse Human Aging in Our Lifetime*, New York, St. Martin's Griffin.

Dragulinescu, Stefan; Veli-Pekka Parkkinen, Jon Williamson. Grading evidence of mechanisms in physics and biology, http://blogs.kent.ac.uk/jonw/projects/grading-evidence-of-mechanisms-in-physics-and-biology.

Furedi, Frank. (2006). *Culture of Fear Revisited* (1997), London, Continuum.

Galtung, Johan. (2017). *Freud-Einstein On Peace*, June 26, http://www.eurasiareview.com/26062017-freud-einstein-on-peace-oped.

Hagopian, Joachim. (2015). *Big Pharma and Post Traumatic Stress Disorder (PTSD): The Deadly Toll that Permanent War Takes on US Soldiers, Awaits the Rest of Us*, January 24, http://www.globalresearch.ca/big-pharma-and-post-traumatic-stress-disorder-ptsd-the-deadly-toll-that-permanent-war-takes-on-us-soldiers-awaits-the-rest-of-us/5426666.

Ilyukhina, Valentina A. (2015). "Contributions of Academicians A.A. Ukhtomsky and N.P. Bechtereva to Multidisciplinary Human Brain Science." In *Anticipation: Learning from the Past. The Russian/Soviet Contributions to the Science of Anticipation*, Mihai Nadin Editor, 81–100. Heidelberg New York Dordrecht London: Springer.

Jaros, Gyorgy G. *Synergy of Complements in Living Systems*, http://www.isss.org/primer/jaros.htm.

Jaros, G.G. and A.B. Baker. (1995). "Safety and Accidents in Anaeasthesia: The Use of Teleonics", in *Systems for the Future: Proceedings of the Australian Systems Conference*, pp. 33–39.

Jasiczek, Dariusz; Rudolf Klimek, Ryszard Tadeusiewicz. (2013). "Informatonosis – an information disease affecting the society", in Rudolf Klimek, Dariusz Jasiczek, Ján Štencl, *Explained Cause of Cancer*, Krakow, Hermes Management, pp. 79–84.

Jia, D.; M.K. Jolly, P. Kulkarni, H. Levine. (2017). "Phenotypic Plasticity and Cell Fate Decisions in Cancer: Insights from Dynamical Systems Theory", *Cancers*, Jun 22;9(7). pii: E70. doi: 10.3390/cancers9070070.

Kampmark, Dr. Binoj. (2017). *Warring in the Oncology Ward*, February 24, http://www.globalresearch.ca/warring-in-the-oncology-ward/5576458

Kant, Immanuel. (1987). *Critique of Judgment* (1790), Translated, with an Introduction, by Werner S. Pluhar, Indianapolis/Cambridge, Hackett Publishing Company.

Khrouski, Konstantin. (2010). All-embracing (triune) medicine of the individual health: a biocosmological perspective », *Journal of Future Studies*, 14/4, p. 65–84.

Koseska, Aneta. Philippe Bastiaens. (2017). "Cell signalling as a cognitive process", *EMBO J.*, Mar 1; 36(5):568–582. doi: 10.15252/embj.201695383. Epub 2017 Jan 30.

Kropotkin, P. (1893). "On the Teaching of Physiography", *The Geographical Journal*, Vol. 2, No. 4 (Oct.), pp. 350–359.

Latest global cancer data…, 12 September 2018, International Agency for Research on Cancer, World Health Organization, Press release No. 263.

Kottke, Tim; Kevin G. Shim, Vanesa Alonso-Camino, Shane Zaidi, Rosa Maria Diaz, Jose Pulido, Jill Thompson, Karishma J. Rajani, Laura Evgin, Elizabeth Ilett, Hardev Pandha, Kevin Harrington, Peter Selby, Alan Melcher, Richard Vile. (2016). "Immunogenicity of self tumor associated proteins is enhanced through protein truncation", *Molecular Therapy Oncolythics*, vol.3, 16030. eCollection 2016.

Levine, Bruce L.; James Miskin, Keith Wonnakott, Cristopher Keir. (2017). Global Manufacturing of CAR T Cell Therapy, *Molecular Therapy Oncolythics*, pp. 92–101.

Lindstrom, Simeon. (2016). *Intentional Living: How To Not Die With Regrets By Living A Life That Matters*, Create Space Independent Publishing Platform.

Mansell, Warren, and Timothy A. Carey. (2015). "A perceptual control revolution?", *The Psychologist*, vol. 28, no. 11, pp. 896–899.

Mansell, W., & Marken, R. S. (2015). The origins and future of control theory in psychology. *Review of General Psychology, 19*(4), 425–430, http://dx.doi.org/10.1037/gpr0000057 .

Margolis, Joseph. (1992). "Praxis and Meaning: Marx's Species-Being and Aristotle's Political Animal", *Marx and Aristotle: Nineteenth-century German Social Theory and Classical Antiquity*, Edited by George E. McCarthy, Savage (Maryland), Rowman & Littlefield Publishers, Inc., pp. 329–355.

Marx, Karl. (1857). *Grundrisse: Introduction*, *https://www.marxists.org/archive/marx/works/1857/grundrisse/ch01.htm*

Maturana, H. (1970). *Biology of cognition*. BCL Report Nr. 9.0. Urbana, Ill.: University of Illinois.

Maturana, H. R. (2002). "Autopoiesis, structural coupling and cognition: A history of these and other notions in the biology of cognition", *Cybernetics & Human Knowing*, 9 (3–4), pp. 5–34.

McKone, Anita. (2013). *Fearless and Fearful Psychology*, https://anitamckone.wordpress.com/articles-2/fearless-and-fearful-psychology

Meier, David; Tinh-Hai Collet, Isabella Locatelli, Jacques Cornuz, Bengt Kayser, David L. Simel, Claudio Sartori. (2017). "Does This Patient Have Acute Mountain Sickness?: The Rational Clinical Examination Systematic Review", *JAMA – The Journal of the American Medical Association*, 318(18):1810, November.

Miller W.B. Jr., Torday J.S. (2017). "A systematic approach to cancer: evolution beyond selection", *Clinical and Translational Medicine*, Dec; 6(1):2. doi: 10.1186/s40169-016-0131-4. Epub 2017 Jan 3.

Muñoz-Espín, Daniel et. al. (2018). A versatile drug delivery system targeting senescent cells**.** *EMBO Molecular Medicine*, e9355 DOI: 10.15252/emmm.201809355

Muraille, Eric. (2014). Generation of individual diversity: a too neglected fundamental property of adaptive immune system, *Frontiers in Immunology*, 13 May, https://doi.org/10.3389/fimmu.2014.00208.

Ohsumi, Yoshinori. (2001). *"Molecular dissection of autophagy: two ubiquitin-like systems." Nature Reviews Molecular Cell Biology.* ***2*** *(3): 211–6. March, PMID 11265251. doi:10.1038/35056522.*

Pearl, Judea and Dana Mackenzie. (2018). *The Book of Why: The New Science of Cause and Effect*, New York, Basic Books.

Pebay-Peyroula, Eva; Hugues Nury, François Parcy, Rob W. H. Ruigrok, Christine Ziegler Leticia F. Cugliandolo (Eds.) (2014). *From Molecules to Living Organisms: an Interplay Between Biology and Physics*, Oxford, Oxford University Press.

Pindar. (1990). *Pythian*, 3, 62-63, Odes. Pindar. Diane Arnson Svarlien.

Plato. (1967). *Gorgias* in *Plato in Twelve Volumes*, Vol. 3 translated by W.R.M. Lamb. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd.

Plato (1969). *Republic*, in *Plato in Twelve Volumes*, Vols. 5 & 6 translated by Paul Shorey. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd.

Poincaré, Henri. (1909). «Lettre à Léon Walras», in Léon Walras «Économique et méchanique», *Bulletin de la Société Vaudoise de Sciences Naturelles*, Vol. 45, pp. 313–325 (pp. 12-13).

Ruiz-Mirazo, K. and A. Moreno. (2004). Basic autonomy as a fundamental step in the synthesis of life. *Artificial Life*, 10, pp. 235–259.

Ruiz-Mirazo, K., J. Pereto, and A. Moreno. (2004). "A universal definition of life: Autonomy and open-ended evolution". *Origins of Life and Evolution of the Biosphere*, 34, 2004, pp. 323–346.

Sabelli, Hector. (2001). "The Co-Creation Hypothesis". In: Gillian Ragsdell, Jennifer Wilby (eds), *Understanding Complexity*. Springer, Boston, Ma, pp. 19–29.

Spassov, Spas. (1998). "Biological Teleology in Contemporary Science", 20th World Congress of Philosophy, Boston, Ma. http://www.bu.edu/wcp/Papers/Scie/ScieSpas.htm.

Tian, Xiao; Jorge Azpurua, Christopher Hine, Amita Vaydia, Max Myakishev-Rempel, Julia Ablaeva, Zhiyong Mao, Eviatar Nevo, Vera Gorbunova, Andrei Seluanov. (2013). "High-molecular-mass hyaluronan mediates the cancer resistance of the naked mole rat", *Nature*, Letter 19 June.

Vallis, Rhyll and Sohail Inayatullah. (2016). "Policy metaphors: From the tuberculosis crusade to the obesity apocalypse", *Futures*, Vol. 84, Part B, November, pp. 133-144, https://doi.org/10.1016/j.futures.2016.04.005.

Vltchek, Andre. (2017). *Middle Eastern surgeon speaks about the "Ecology of War"*, 01 May, http://www.investigaction.net/en/middle-eastern-surgeon-speaks-about-the-ecology-of-war/.

von Glasersfeld, Ernst. (1990). "Teleology and the Concepts of Causation". *Philosophica*, 46 (2), pp. 17–43.

von Uexküll, Jakob.(1982). “The Theory of Meaning” (1940), *Semiotica*, 42-1, pp. 2-82.

Wang, Mingzhang et al. (2017). “Quenching protein dynamics interferes with HIV capsid maturation”, *Nature Communications*, volume 8.

Xuan, Kun; Bei Li, Hao Guo, Wei Sun, Xiaoxing Kou, Xiaoning He, Yongjie Zhang, Jin Sun, Anqi Liu, Li Liao, Shiyu Liu, Wenjia Liu, Chenghu Hu, Songtao Shi, Yan Jin. (2018). “Deciduous autologous tooth stem cells regenerate dental pulp after implantation into injured teeth”. *Science Translational Medicine*, 10 (455): eaaf3227 DOI: 10.1126/scitranslmed.aaf3227

ARISTOTELIAN ENTELECHY AND MODERN BIOLOGY

Georges CHAPOUTHIER[1]

АРИСТОТЕЛЕВСКАЯ ЭНТЕЛЕХИЯ И СОВРЕМЕННАЯ БИОЛОГИЯ

Жорж ЧАПОУТЬЕР

"Linnaeus and Cuvier (...) were mere schoolboys to old Aristotle."
Darwin

Abstract. Aristotelian entelechy can reveal a number of very modern aspects of biology. The concept combines the achievement of a whole (holos) and of an ultimate purpose (telos), the purpose being a goal by construction internal to living organisms, as opposed to vitalism. This naturalist concept can be found, inter alia in embryology, cellular metabolism, genetics, the evolution of the species, and ultimately in the general evolution of living beings towards ever-greater complexity. The analysis of movements of living organisms and their complexity shows entelechy to be compatible with and complementary to Darwinian selection.

Keywords: Entelechy – Biology – Living being – Darwinian Selection – Purpose – Holos – Telos

Contents

Introduction
1. What is entelechy?
2. Entelechy and Ritter
3. Entelechy and Complexity
4. Applications
5. The modern promises of entelechy
6. Orthogenesis moving towards greater complexity
7. Purposes
Conclusion

[1] The French National Center for Scientific Research (Centre national de la recherche scientifique, CNRS), Paris, FRANCE.
(Национальный центр научных исследований-НЦНИ, Франции)

“Линней и Кювье (...) это всего лишь школьники,
в сравнении с первоначальным уровнем знания Аристотеля.”
Чарльз Дарвин

Резюме. Аристотелевское фундаментальное понятие энтелехии в состоянии раскрыть самые современные аспекты биологии. Эта концепция сочетает в себе достижение целого (*холос*) и конечной цели (*телос*), и где цель являет собой целевую направленность к достижению необходимого результата посредством создания конструктивных систем *внутри* живых организмов, в отличие от витализма. Эта натуралистская концепция может быть найдена, среди прочего, в эмбриологии, внутриклеточном метаболизме, генетике, эволюции видов и, в конечном счете, в общей эволюции живых существ в русле процесса постоянно возрастающей сложности организации. Анализ движений живых организмов и сложности их организации демонстрирует нам, что концепция энтелехии совместима с дарвиновской теорией естественного отбора и дополняет ее.
Ключевые слова: Энтелехия – Биология – Живое существо – дарвиновская теория естественного отбора – Цель – Холос – Телос

Содержание

Вступление
1. Что такое энтелехия?
2. Энтелехия и Риттер
3. Энтелехия и сложность
4. Практическое применение
5.Современные возможности применения понятия энтелехии
6. Ортогенез развивается в направлении возникновения более сложных форм организации
7. Цели
Заключение

Introduction

In 1932, William E. Ritter published an excellent article under the title “Why Aristotle invented the word Entelecheia”[2]. I shall be referring to this text as it shows the relevance and modernity of the Aristotelian concept of entelechy (*entelecheia* in Greek) when applied to modern biology, and even to other fields as well. While Ritter’s paper is certainly not a recent publication, the approach is still relevant today.

[2] W. E. Ritter, Why Aristotle invented the word Entelecheia, *The Quarterly Review of Biology*, 1932, 7(4), pp 377-404.

I shall present this exemplary article, then show how the Aristotelian thesis as analysed remains, for other reasons, relevant in the contemporary world of biological thought.

1. What is entelechy?

To familiarise the reader with the philosophical concept of entelechy, we can start by summarising the meaning and scope of the Aristotelian term of entelechy. Entelechy is the very dynamics of a being, taking a being from potential to act to an act realised; it is the very nature of the being developing and achieving its own functionality, and through the web of relationships that comprise its internal structure, finding its own functionality and existential purpose (*telos*), at the same time as achieving functional fulfilment as a whole (*holos*).

2. Entelechy and Ritter

We shall look closely at Ritter's understanding of the same term. Ritter noted that Aristotle, as the founding father of biology [3] [4], was interested in procreation and development, which, quite logically, led to explore the question of the "determinate relation between what developing bodies are and do in a given developmental stage, [and] what they were and did in their preceding stages"[5]. This then leads to a comparison of entelechy as seen by Aristotle and the way it was viewed by a modern writer, the German embryologist Hans Driesch (1867-1941). For Ritter, Driesch's understanding of entelechy is fallacious, and for two reasons: firstly, because entelechy is seen as being equivalent to energy (*energeia*), and therefore, secondly, because while Driesch may recognise entelechy achieving completion in the whole (holos), he does not recognise any teleological aspect (telos) in it.

Ritter is correct in these observations, but it is important to focus on and extend his argument. When speaking of entelechy, the Aristotelian meaning must be used, but there must not be any confusion with entelechy as understood by proponents of vitalism as well as understood by Hans Driesch who turned it into an enigmatic "vital principle" devoid of matter and which could not be reduced to physical and chemical components. A clear distinction must be made between Aristotelian entelechy and such vitalism which is not compatible with modern science. This is an essential point to note.

Contrary to arguments put forth by Hans Driesch, Ritter saw the correct concept of entelechy as being based on the actualisation of potential (potential to act) and not on action alone (energeia). The telos in entelechy must not be confused with the "end" (the term used in English): the end, unlike entelechy, does not necessarily convey the concept of full achievement. In Aristotelian entelechy, the telos (or purpose) involves the idea of fulfilment, of a being achieving full development as a

[3] L. Bourgey, *Observation et expérience chez Aristote*, Editeur Librairie Philosophique J. Vrin, Paris, 1955.

[4] P. Pellegrin, *La classification des animaux chez Aristote: Statut de la biologie et unité de l'aristotélisme*, Les belles lettres, Paris, 1983.

[5] W. E. Ritter, *op.cit*, p 378.

final, functional whole. The telos is by definition related to the holos. Conversely, the holos cannot be accomplished without the telos. Ritter cites the example of a salamander with one leg cut off and grafted to its back: it may be whole, but it is not fully functional, lacking the telos dimension of the functional purpose of a living being endowed with complete life in accordance with its form.

3. Entelechy and Complexity

For Ritter, while such a concept of entelechy may preclude plurality, it is "not opposed to the idea of manifoldness and variety... it admits of all the complexity of vital phenomena"[6]. And in such complexity, "whole" and "complete whole" are not the same, as illustrated by the example of the salamander, *whole* with a grafted leg, and *complete whole* in its normal state.

Here we come to concepts that I have developed extensively in my theory of complexity in mosaic formation[7]. According to the theory, elements can sometimes be juxtaposed (as in the case of the salamander, with one leg grafted on its back having no functional capacity, but merely "juxtaposed" to the rest of the body), or elements may be integrated into a harmonious whole (e.g. a normal salamander). The model of complexity in mosaic formation as I have presented it is based on two fundamental principles: the *juxtaposition* of elements of the same kind, and the possible and subsequent *integration* of such elements into a harmonious whole where, as in a mosaic forming a work of art, the whole does not cancel out the autonomy of the component parts. This is well aligned with Aristotelian ideas of entelechy when related to complexity in living beings. The complexity of living beings should be seen as diversity within a unit supported by the holos and also containing the underlying telos.

4. Applications

While entelechy can easily be seen to apply to developing biological structures, it should be noted that Aristotle also used the term to describe purely physical phenomena. In his writings on meteorology, Aristotle cites examples of changing states, e.g. melting ice, and water becoming "air" (i.e. "vapour" for modern science); as Ritter points out, this was at a time when there was no knowledge of thermodynamics[8]. Yet Aristotle also uses the term of entelechy when speaking of light, but in circumstances so far removed from modern physics that the reference cannot be accepted as legitimate.

We shall move onto actual living systems, even though the distinction is not perfectly clear-cut. Aristotle considered that "living bodies (individual men by no

---

[6] *Ibid*, p 381.

[7] G. Chapouthier, *The Mosaic Theory of Natural Complexity – A scientific and philosophical approach*, Editions des maisons des sciences de l'homme associees, Collection interdisciplinaire EMSHA, La Plaine-Saint-Denis, France, 2018, ISBN: 9782821895744, http://books.openedition.org/emsha/200.

[8] W. E. Ritter, *op.cit*, p 383.

means excepted) came within the domain of physics"[9]. This is another way of saying, conversely and in general, that for Aristotle the physical universe had both biological architecture and biological logic[10]. The logic of the world is the logic of living beings: "Aristotle's whole philosophy is indeed a biological one"[11].

The examples given here are restricted to the field of contemporary science that is still in line with knowledge at the time of Aristotle. We shall not be commenting on Aristotle's view that entelechy is involved in reproduction, even though Ritter devotes a substantial part of his article to the subject, showing how Aristotle's fine reasoning endeavoured to have entelechy involved in reproductive processes, by linking (as could be done by common sense) the potential of the parent body with the final achievement of reproduction. Unfortunately his arguments are based on scientifically unsound ideas (the primacy of the male principle in reproduction, and without germline/soma separation). "As Aristotle had no knowledge of germ cells, it was, of course impossible for him to have any conception of heredity and genetics in the modern sense"[12]. In the cases we have chosen to cite here, there is no conflict between the findings of modern science and Aristotle's approach.

Embryology, the science of individual development and potential living beings, provides a philosophical link with ontology, the knowledge of the being, but with obvious reference to development, "the coming-to-be, of an individual fowl or frog"[13]. It is thus an ideal domain for the expression of entelechy. When Aristotle compares a work of nature to a work of art, he is implicitly showing the telos that must be contained in the work of nature. In both cases, there is potential which is realised to achieve fulfilment. In a more specific example, an embryo is produced through epigenesis, a process requiring sequenced development of different organs that will ultimately make up the final organism: "the completed man consists of a great number of parts which have successively come-to-be"[14], the parts having to comprise "not an assemblage, but a unified whole"[15]. Here we find the terminology which I used to describe complexity in mosaic formation, the distinction between an "assemblage" (i.e. "juxtaposition" of elements with little or no integration) and a "unified whole" (i.e. an "integrated" whole). The same entelechy can of course apply to non-human living organisms, and to the component parts of a living organism and which themselves may go through a process of integration: "the femur or liver or stomach or brain, for example, each has his own entelecheia"[16].

Another example cited by Ritter is cellular metabolism, with a number of different chemical reactions usually contributing to (directed towards) a function at an intracellular level, even though they are often subjected to opposing chemical

---

[9] *Ibid*, p 385.
[10] K. Khroutski, All-embracing (triune) medicine of the individual health: a biocosmological perspective. *J. Future Studies*, 2010; 14(4):65–84.
[11] W. E. Ritter, *op.cit*, p. 386.
[12] *Ibid.*, p. 398
[13] *Ibid.*, p. 386
[14] *Ibid.*, p. 389
[15] *Ibid*, p. 389.
[16] *Ibid*, p. 390.

reactions that can have a modulating effect. Through the interplay of cellular metabolism, which is one of the most striking expressions displayed by an organism as it lives, the body can "be and do just what it is and does"[17]. Here is evidence of entelechy being omnipresent in life.

5. The modern promises of entelechy

Aristotle obviously cannot be criticised for developing ideas within the framework of the limited knowledge of his time, and therefore for not having seen the hypotheses that are the basis of modern biology. His system obviously cannot be criticised for omitting changing species and the theory of evolution; indeed, it took many centuries for biology to reach that stage. Nor can he be criticised for not going beyond hylomorphism to develop a theory of relations as they form, as was done much later by the French philosopher Simondon[18]. It would be impossible to imagine Aristotle embarking on an overall and structuralist vision of relationships between parts, as the structuralists[19] did in modern times. (Any number of further examples could be given.)

Examining the mater closely, it can be seen that entelechy already contained the initial nucleus of many hypotheses used in modern biology, and not only in the fields of embryology and metabolism as mentioned above. Entelechy did contain the potential for living beings, or even physical entities, to be seen as undergoing constant change, the idea of constructive relationships, of achievement on the path to fulfilment of a final cause, as now seen with many examples in modern science. It has already been seen that entelechy, when applied to physical phenomena, e.g. the different states in the water cycle, can be considered as suggesting a concept similar to modern thermodynamics.

We shall now look at biological systems. While Aristotle's theories on heredity are considered to be false in the light of modern knowledge, as he overstated the genetic function of the male germline, it is still possible for modern theories on genes to fit the concept of entelechy. It is now known[20] that in the course of what could be described as geological eras, introns are duplicated in silent areas of the genome, producing identical introns which then undergo mutations and end up as complex clusters. If and when the clusters become functional, they can develop into exons and give rise to a new characteristic of the organism. The characteristic will then remain or disappear in later generations depending on Darwinian selection, depending on whether or not it provides an advantage to the organism concerned. For complexity, it can be said that the introns initially form juxtaposed groups that subsequently form integrated groups. In Aristotelian terms, it can be said that the potential contained in the juxtaposed introns tends to a complete and final whole emerging with a new

[17] *Ibid*, p 398.
[18] J.H.Barthélémy, *Simondon ou l'encyclopédisme génétique*, Presses Universitaires de France, Paris, 2008.
[19] J. Piaget, *Le structuralisme*, Presses Universitaires de France, Paris, 1996.
[20] S. Ohno, *Evolution by Gene Duplication*, Springer Verlag, Munich, Germany, 1970.

characteristic. Thus the cluster of introns is fully accomplished and transformed into exons, and is, with both holos and telos, a manifestation of entelechy.

Another example of a modern thesis in alignment with entelechy is the theory of evolution. Here the shift is from individual, ontogenetic potential (already noted as corresponding closely to Aristotelian theses) to collective, phylogenetic potential. While the mechanics of natural selection is blind and never finalised, it can still be reconciled with the parallel occurrence of other processes leading to apparent linearity in certain groups of living beings. This linearity, which has been described as orthogenesis, was, in our theory of complexity in mosaic formation, explained by universal processes of juxtaposition and subsequent integration of initially juxtaposed elements. If such locally directional evolution can be recognised for certain lineages (e.g. for the development of the encephalon in the vertebrate lineage), it is then possible to hypothesise that in such a framework there can be action through a holos and a telos combining to achieve a complete form, i.e. in this example, a species with strong cephalic development.

A degree of precaution is required here to avoid leaping to the conclusion that human beings are the obvious fulfilment of such a process, to avoid falling into the trap of a man-oriented process as in the misguided "anthropic principle"[21]. In the case we are dealing with here, there is no evidence to show that the human brain is biologically "superior" to the dolphin brain or elephant brain. In fact, when judged on moral criteria, human action could provide evidence for the opposite argument.[22] Human beings have clearly acquired original and specific cultural features, but this does not endow humans with a position of privilege in a strictly biological context. There was no evolutionary path which *necessarily* led to the specific biological organisation of the human being. The evolutionary development of the brain of vertebrates could have been quite different, not necessarily producing a hominoid, but another quite different being, and not necessarily chimpanzee-like in appearance. Given the wide range and variety of anatomical shapes and forms on the planet Earth, it is amazing that advocates of the anthropic principle should imagine that evolution, whether on Earth or elsewhere, leads to the one special form of naked ape known as a human being. The blind process of Darwinian selection and the random diversity produced by it are clearly relevant here, and telos alone cannot be the sole explanation for everything.

6. Orthogenesis moving towards greater complexity

Looking beyond the orthogenesis of only one specific case of genetic lineage, it is possible to consider entelechy in a broader scope encompassing all living organisms, and leading, *ipso facto*, to greater complexity. I have propounded this

[21] B. Carter, Large number coincidences and the anthropic principle in cosmology, in M. S. Longair (ed.), *Confrontation of Cosmological Theory with Astronomical Data*, Dordrecht, Reidel Publisher, 1974.

[22] A. Schopenhauer, *Parerga & Paralipomena*, CODA Editions, Paris, 2005.

thesis in previous publications[23], and if the thesis is valid, then identical properties should be observed in separate groups once a certain level of complexity is achieved, or similar characteristics should appear in quite distinct groups with properties having the same architecture of complexity. Such cases can be observed in nature, as will be seen with a number of examples.

Once a certain level of complexity has been achieved, *mobility* occurs in many species that can thus adapt more efficiently to their environment. The adoption of mobile behaviour can be seen in evolved unicellular organisms, in siphonophores and in cephalopod molluscs. After achieving a given level of complexity, *homeothermy* is developed, providing greater stability of processes in living organisms. In aquatic environments, the water sometimes stabilises the temperature, but on land, homeothermy can be observed at three distinct stages: with mammals, with dinosaurs/birds and with social insects (if an insect colony can be accepted as a homeothermic being). The development of electromagnetic skills (e.g. sight which is more accurate than the other senses) often occurs at a later stage in many different genetic lineages, e.g. vertebrates, cephalopod molluscs, and social hymenoptera. With the emergence of integrated communities (colonies or societies), extended communication is a final-stage development in many lineages, e.g. vertebrates and insects. There is also the use of artefacts to extend natural skills, i.e. using instruments or tools to increase the potential of physical organs, as occurred with various groups of vertebrates, with social insects and cephalopod molluscs. Many other such examples could be cited.

Here again, such evolution does not and cannot preclude the parallel and systematic processes of Darwinian natural selection leading to the disappearance of biological entities unable to adapt to their environment.

7. Purposes

While phenomena involved in orthogenesis as observed in living organisms, and including broader orthogenesis of living organisms developing greater complexity, may suggest that entelechy exists at their level, such entelechy does, however, appear to be restricted by the very limits which the blind mechanics of Darwinian selection imposes on the telos. The conclusion shall therefore focus on the status that can be given to such limited purpose in the context of biology today. What is the status of this telos as seen by a modern-day biologist? Is it possible to reconcile Aristotle's telos and Darwin's blind, natural selection?

On a metaphysical level, the telos within entelechy can probably be an answer to the often lively and controversial debates in science addressing the question of the ultimate purpose. There are different types of purpose: one is based on the belief in the existence of a god, arguing that the ultimate purpose is the decision of a higher being, i.e. God, intervening directly in the workings of the universe. In strong opposition to this are the modern, materialistic, scientific arguments refuting the idea

[23] G. Chapouthier, *The Mosaic Theory of Natural Complexity – A scientific and philosophical approach*, *op. cit.*

of a god intervening in nature, and arguing that the universe operates autonomously without any outside intervention.

Yet Aristotelian purpose is just that: on a completely different level, the level where living beings are built, and it remains within a context of naturalism. Entelechy is the very essence of life as it occurs, the very development of hidden potentials achieving their ultimate expression in functional accomplishment. The purpose observed is thus inherent in the functioning of the organisms concerned. Telos here is what I have referred to in previous publications as "purpose through construction"[24], not requiring intervention from any outside agent, and this is an essential point. Such purpose is compatible with all premises, be they materialistic, spiritualistic or metaphysical, theistic or atheistic, given that it is both clearly *outside the scope of metaphysics and within the scope of science*. Most importantly, such purpose is fully compatible with the blind processes of Darwinian selection, and therefore with the principles that govern modern natural science. Blind selection cannot explain everything, and directional processes (e.g. as argued for complexity in mosaic formation) allow this purpose through construction. This purpose can include telos in the building of living organisms, or even, if the Aristotelian hypothesis that the logic of the cosmos is the logic of living organisms, can apply to the overall architecture of the universe. Such construction-based telos remains compatible with the existence of random processes in nature, and the existence of Darwinian selection in biology.

The same reasoning can be used for the beginnings of life and macromolecules. With the existence of carbon as a binding atom, able to form bonds with other atoms, it is possible to build macromolecules which are then the direct result of carbon chemistry, and could be described as "carbon entelechy". This is why carbon macromolecules can be found in other parts of the solar system[25] and quite possibly everywhere in the cosmos.

Conclusion

The living world evolves, as can be seen by comparing before and after. It carves a path between temporarily complete structures that stand as stages on that path. These structures are macromolecules, cells, organs, organisms, populations, and species, comprising key points in achieving and combining holos and telos. They are the stages arising from entelechy which, in parallel with random and blind Darwinian processes, are the underlying elements in the evolution of life. In the present paper, designed to show Aristotelian entelechy and its modern biological perspectives, we have seen the need to avoid two major stumbling blocks: non-Aristotelian entelechy based on vitalism whereby the principle of life cannot be explained by the laws of

[24] G.Chapouthier, L'évolution vers la complexité: finalité par construction, *Arch. Int. Physiol. Biochem.*, 1986, 94(4), pp 95–100.

[25] A. Bardyn *et al*, Carbon-rich dust in comet 67P/Churyumov-Gerasimenko measured by COSIMA/*Rosetta Monthly Notices of the Royal Astronomical Society*, Vol. 469, Suppl_2, 2017, pp S712–S722, https://doi.org/10.1093/mnras/stx2640 ; A. Bardyn. *Characterisation de la matiere organique contenue dans les particules de la comete 67P/Churyumov-Gerasimenko par spectrometrie de masse avec l'instrument COSIMA de la sonde Rosetta*. Universite Paris-Est, 2016, https://tel.archives-ouvertes.fr/tel-01584559/document

physics and chemistry, and anthropocentric entelechy which, ironically, sees human beings in the specific anatomical form of the chimpanzee as being the one and only fulfilled result possible in the evolution of the species.

When these two erroneous paths are avoided, modern biology stands with two epistemological and complementary bases: Aristotle's entelechy and Darwin's natural selection.

References

Barthélémy, J.H. (2008). *Simondon ou l'encyclopédisme génétique*, Presses Universitaires de France, Paris.

Bourgey, L. (1955). *Observation et expérience chez Aristotle*, Editeur Librairie Philosophique J. Vrin, Paris.

Carter, B. (1974). Large number coincidences and the anthropic principle in cosmology, in M. S. Longair (ed.), *Confrontation of Cosmological Theory with Astronomical Data*, Dordrecht, Reidel Publisher.

Chapouthier, G. (1986). L'évolution vers la complexité : finalité par construction, *Arch. Int. Physiol. Biochem.* 94(4): pp 95–100.

Chapouthier, G. (2018). *The Mosaic Theory of Natural Complexity – A scientific and philosophical approach*, Editions des maisons des sciences de l'homme associees, Collection interdisciplinaire EMSHA, La Plaine-Saint-Denis, France, ISBN: 9782821895744, http://books.openedition.org/emsha/200.

Khroutski, K. (2010). All-embracing (triune) medicine of the individual health: a biocosmological perspective. *J. Future Studies*; 14(4):65–84.

Ohno, S. (1970). *Evolution by Gene Duplication*, Springer Verlag, Munich, Germany.

Pellegrin, P. (1983). *La classification des animaux chez Aristote: Statut de la biologie et unité de l'aristotélisme*, Les belles lettres, Paris.

Piaget, J. (1996). *Le structuralisme*, Presses Universitaires de France, Paris,.

Ritter, W. E. (1932). "Why Aristotle invented the word Entelecheia," *The Quarterly Review of Biology*, 7(4): pp. 377–404.

Schopenhauer, A. (2005). *Parerga & Paralipomena*, CODA Editions, Paris.

EPISTEMOLOGICAL AND ONTOLOGICAL TOOLS FOR AN EXTENDED VIEW OF A HUMAN PERSON AS A SOCIAL BEING AND ITS ENVIRONMENT *PART 2*: THE INCREASING INHOMOGENEITY OF THE POWER OF SCIENCE AND AN "ARISTOTELIAN" PROPOSAL TO COPE WITH

Walter W. KOFLER[1]

ВОЗРАСТАЮЩАЯ НЕОДНОРОДНОСТЬ ВЛАСТИ НАУКИ И «АРИСТОТЕЛЕВСКОЕ» ПРЕДЛОЖЕНИЕ КАК СПРАВИТЬСЯ С ЭТИМ – *ВТОРАЯ ЧАСТЬ* «ЭПИСТЕМОЛОГИЧЕСКИХ И ОНТОЛОГИЧЕСКИХ ИНСТРУМЕНТОВ ДЛЯ РАСШИРЕННОГО ВЗГЛЯДА НА ЧЕЛОВЕКА КАК СОЦИАЛЬНОЕ СУЩЕСТВО И ЕГО СРЕДУ»[2]

Walter W. KOFLER

Abstract. Fundamental changings have taken place in the last 2-3 decades and are taking further on – with relevant influences for the eco-socio-cultural living conditions: For instance, the climate change is taken as reality and the discussions are reduced; while curative medicine is as powerful as never before, although is not sufficient enough in relevant cases. The situation in medicine can be used as indicator in which fields we can and in which we should not expect the needed scientific support: The analysis demonstrates that health related aspects caused by physical interactions can be predicted even in the single case. This is relevant: Applications of science are related any time on special single cases – not only in medicine. But the power of sciences is reducing up to the deprivation of any causal fundament e.g. for Alzheimer. Therefore cluster method remains actually as the only related tool. Pfizer – the world biggest pharmaceutical company – skipped its research program to develop a drug against Alzheimer this year – not because of the lack of money but because of the lack of power of the used scientific theoretical frames. This should be accepted as an alarm clock for the scientific community that the borders of the power of the used paradigms are reached and a discussion about the extension of our scientific frames should be started.

Therefore an additional frame is needed. Relevant support can be expected from Aristotelian positions. One key aspect is demonstrated for the needed "Extended View": How to integrate the single case more appropriate into a frame which is compatible with the powerful state of knowledge in the different related scientific disciplines.

Keywords: power of science, lack of power, Alzheimer, information, "Extended View", Aristotle, single case and predictability, inhibition-enforcement, the Aristotelian aetiology, potentia, discrimination ability, WINWIN model for evolution, comprehensive simplicity

---

[1] I.M. Sechenov First Moscow State Medical University, Moscow, RUSSIA; International Academy of Science – Health & Ecology, Innsbruck, AUSTRIA.

[2] See the article: Kofler, W. (2012). "Epistemological and ontological tools for an Extended View of a human person as a social being and its environments – Part 1: Considerations about ontological and epistemological options and restrictions," *Biocosmology – neo-Aristotelism* Vol.2, No.4 (Autumn 2012). Pp. 279–298.

Contents

1. THE PROBLEM
1.1. Analysis: The metaphor of the perforated barrel
1.2. Consequences
A PROPOSAL FOR A SOLUTION
2.1. The support of think tanks to Sechenov and Pavlov.
2.2. The integration of the evolutionary process
2.3. Supporting the model through the Aristotelian science
3. TO THE SUPPORT OF ARISTOTLE'S AETIOLOGY
3.1. Four types of causation
3.1.1. Comparison of the traditional understanding of causation ("normal science" according to Th. Kuhn) and the application of four causes
3.1.2. The example1: Malaria
3.2. Compatibility of the "Extended View" with "Normal sciences" – additional offers and demands
3.2.1. Example 2: High blood pressure and CHD – an additional type of *causa finalis*
3.3. Potentia
3.3.1. Substance monistic position – no mind-body dilemma
3.3.2. Where is the causation for information?
3.4. Comprehensive simplicity and the need to introduce a term
3.4.1. The need to introduce an additional term: "discrimination ability"
3.4.2. The need to characterize that "for what the term should stay and its empirical proving"
3.4.3. Ability for discrimination and ability to use energy – expressions of just one potentia
3.5. Intelligent design or *Causa finalis*?
3.5.1. Newton: Natural laws and the first mover
3.5.2. Newton´s position is falsified or relativized
4. TERMS, SYMPOLS, FORMULAS, NATURAL LAWS, ETC: JUST FREE INVENTIONS OF THE HUMAN MIND
5. PREDICTABILIY AND ITS LIMITS: THE METAPHOR OF CHESS
5.1. Inhibition/enforcement and WIN/WIN as basis for emergent progresses
5.2. Two types of consents: Inside oriented – outside oriented – for one intention
5.3. Potentia – comprehensive understood?
6. CONCLUSIONS

Резюме. Фундаментальные изменения произошли за последние 2-3 десятилетия, которые имеют значение для современности и влияют на условия эко-социо-культурной жизни: например, изменение климата принимается как данность, и дискуссии на этот счет сокращаются; в то время как лечебная медицина стала сильной как никогда прежде, хотя в определенных случаях ее возможностей оказывается недостаточно. Ситуацию в медицине можно использовать в качестве индикатора – в каких областях мы можем, и где не должны ожидать необходимой научной поддержки: Анализ показывает, что развитие человеческого потенциала (здоровья человека), в отношении к аспектам физического воздействия, могут быть предсказаны даже в единичном случае. Это актуально: применение научных достижений, и не только в медицине – всегда связано с особыми случаями. Но сила науки всегда убывает, если отсутствует причинное обоснование данного феномена, например как в случае болезни Альцгеймера. В этой связи, кластерный метод остается фактически единственным подходящим инструментом. Например «Пфайзер» – крупнейшая в мире фармацевтическая компания – закрыла свою исследовательскую программу по разработке препарата против болезни Альцгеймера в этом году, причем сделала это не из-за нехватки денег, но по причине отсутствия необходимых научных теоретических оснований и конструкций для успешных разработок. Это следует воспринять в качестве пробуждающего сигнала будильника для научного сообщества – что границы возможностей используемых парадигм достигнуты, и необходимо обсудить вопрос о расширении наших научных теоретических конструкций.

Следовательно, требуются дополнительные понятийные структуры и концептуальные схемы. Соответствующую поддержку здесь можно ожидать и от аристотелевских научных позиций. Ключевым аспектом выступает демонстрация необходимого «Расширенного Взгляда» на научные возможности: Как интегрировать отдельный случай более подходящим образом в соответствующую концептуальную конструкцию, которая является совместимой с мощным состоянием знаний в разных смежных научных дисциплинах.

Ключевые слова: сила науки, недостаток силы, болезнь Альцгеймера, информация, «Расширенный Взгляд», Аристотель, единичный случай и предсказуемость, подавление-принуждение, Аристотелевская этиология, потенциал, дискриминационная способность, беспроигрышная (win-win) модель для развития, всеобъемлющая простота

Содержание

1. ПРОБЛЕМА
   1.1. Анализ: метафора продырявленной бочки
   1.2. Последствия
2. ПРЕДЛОЖЕНИЕ ПО РЕШЕНИЮ
   2.1. Оказать аналитическую поддержку достижениям Сеченова и Павлова
   2.2. Интеграция эволюционного процесса
   2.3. Поддержка модели через Аристотелевскую науку
3. К ПОДДЕРЖКЕ АРИСТОТЕЛЕВСКОЙ ЭТИОЛОГИИ
   3.1. Четыре типа причин
      3.1.1. Сравнение традиционного понимания причинности («нормальная наука», по Т.Куну) и применение четырех Аристотелевских причин
      3.1.2. Пример 1: Малярия

3.2. Совместимость «Расширенного Взгляда» с «Нормальными науками» – дополнительные предложения и требования
3.2.1. Пример 2: высокое кровяное давление и ИБС – дополнительный тип конечной причины
3.3. Потенциал
3.3.1. Монистическая позиция субстанции – отсутствие дилеммы сознания и тела
3.3.2. Где причинность для информации?
3.4. Всеобъемлющая простота и необходимость введения термина
3.4.1. Необходимость для введения дополнительного термина: «дискриминационная способность»
3.4.2. Необходимость охарактеризовать это – «для того, что термин должен остаться и его эмпирическое подтверждение»
3.4.3. Способность различать и способность использовать энергию – выражая только один потенциал
3.5. Продуманный дизайн или Конечная причина?
3.5.1. Ньютон: Законы природы и первые достижения
3.5.2. Позиция Ньютона фальсифицирована или релятивизирована
4. ТЕРМИНЫ, СИМВОЛЫ, ФОРМУЛЫ ЕСТЕСТВЕННЫХ ЗАКОНОВ И Т.Д.: ЭТО ИМЕННО СВОБОДНЫЕ ИЗОБРЕТЕНИЯ ЧЕЛОВЕЧЕСКОГО УМА
5. ПРОГНОЗИРОВАНИЕ И ЕГО ПРЕДЕЛЫ: МЕТАФОРА ШАХМАТ
5.1. Подавление/принуждение и беспроигрышная стратегия как основа для новых достижений
5.2. Два типа согласования: ориентированный вовнутрь – ориентированный вовне – для одного намерения?
5.3. Потенциал – всестороннее понимание
6. ВЫВОДЫ

1. THE PROBLEM

In part 1 different considerations were presented about ontological and epistemological options and restrictions[3]. They allow to deal more adequate with the fundamental changings which have taken place in the last 2-3 decades and are taking further on – with relevant influences for the eco-socio-cultural living conditions: Now there are no more discussions (e.g.) about the climate change. It is reality. And nobody will contradict: The curative medicine is as powerful as never before. Look only on the progresses in accident surgery or the applications of biochemical offers.

But the progress cannot be observed in all future relevant diseases. Remember Alzheimer: Dementia dominates actually for more and more victims and their families the daily life. Nevertheless, we do not use a scientific model to understand this disease. So the actually applied scientific frame enables as to predictions in an extreme wide range: from causal predictions in any single case to a lack of any causal based prediction even in the average. And any applier of sciences has to deal with

[3] Kofler W: Epistemological and ontological tools for an Extended View of a human person as a social being and its environments, part 1: Considerations about ontological and epistemological options and restrictions, *Biocosmology – Neo-Aristotelism*, 2(4): 273–292.

single cases. So we have to focus also on the predictability for the single case. All the following arguments are integrated in the so called "Extended View". This model should extend but not substitute the given "normal sciences (according to Th. Kuhn[4]). Such an extension is possible thanks to integration of additional paradigmatic positions into dynamic understood given paradigms.

1.1. Analysis: The metaphor of the perforated barrel

The situation in medicine can be used as indicator in which fields we can and in which we should not expect the needed scientific support: I compare this with the metaphor of a perforated barrel[5]: Assume the power of science in a comparison of a barrel to collect the lifesaving water. The bottom and the next part of the staves are totally tight. As higher the staves are as more perforated they are. The highest barrel hoop is linked with the whole barrel just with few staves. Therefore as more water will flow out as higher the level of water is rising. Nearly the whole additional water will flow away if the water level has come to the area with only few staves.

Now we attribute health problems and their evolutionary relationship to the height of the barrel: Health problems based just on classic physical reasons are on the bottom. We can calculate in every single case e.g. if a bone will break or not because of a fall, if we have just the physical characteristics. Gravitation influences the movement even of the so called "Dark matter" in the very ancient universe. Its effect on any bone is not different as to any solid body of "Light matter" with the same physical characteristics. So we can neglect that the bone is produced by a living being.

Our prediction for the individual reaction will be a little less exact for the single case of a classic chemical interaction even on a morphological living structure, e.g. of a trop of acid on the skin of any single human person. The special nature of living beings can never be neglected in case of poisoning. You can predict that about 500 rats will die on the poison, if you expose 1000 rats to the *dosis letalis* 50. But you cannot predict the future of a single rat. We have to consider biological variability. Without living beings no poisoning! Life started about 4 billion years ago.

A principle change takes place on the next level. It deals e.g. with high blood pressure and CHD. These pathological bodily processes can be caused just by morphological inputs, e.g. thanks to food habits. An additional and in principle different causation is coming from "inside" by subjective valuations (e.g. psychosocial stress) or by a combination of both. Even monkeys show high blood pressure. Primates exist since about 60 Million years. But there is no scientific model to link on a causal levels both types of processes (Body-mind-dilemma). Therefore the scientific argumentation is never "a closed chain of causality" but only the "risk" to link with the causal models of biology.

The situation is changing again fundamentally e.g. with Alzheimer: This disease is represented with the highest level of the barrel. Nearly all additional water is

[4] *See*: Kuhn Th.: The structure of scientific revolutions, Univ. of Chicago, 1962.

[5] *See*: Kofler W.: Pfizer ends Alzheimer-Research: An Emergency Signal for Medicine and Politics, *Herald of International Academy of Sciences*, Russian Section, 2018, 1, 56–62.

running out: Now the patient is never able to construct and realize processes which have been typical for his personality. The causation is coming from inside. Chemical, biological and other external influences seem to be not critical – maybe supporting the process. The time period between the occurrence of monkeys and of Homo sapiens is so long, that it is not a surprise that fundamental improvements in dealing with meaning and abstract ideas could have taken place.

1.2. Consequences:

You see: We can start our considerations from two sides:

a) to focus on an extended view of the evolutionary process, and

b) to focus on the principles of the decision making of the person

Both topics are interlinked. But we have to accept that we are not ideal. Therefore we have to focus our interest first on one aspect and neglect temporarily the other one. Therefore I will focus my interest on the timeless valid position of Aristotle and his four causes. Medical doctors remember the physiological discovers of Sechenov and Pavlov if the terms "to focus–to inhibit" are used.

2. A PROPOSAL FOR A SOLUTION

2.1. The support of think tanks to Sechenov and Pavlov

Sechenov discovered that the speed of a reflex is as more inhibited as more parts of the brain are integrated – up to the option, that the reflex is suppressed[6]. And Pavlov could confirm with his experiments about conditioning that the relevance of a stimulus – maybe the sound of a bell – can be enforced and modified in his meaning. So the sound of the bell can cause the stimulation of salivation without any food.

Both discoveries can be linked to a general principle of "inhibition/enforcement", which is valid for processes on any evolutionary level. Firstly, it can be linked with another stay of knowledge. The conservation laws in physics: Energy cannot be lost or won, but modified. The general principle ~~of~~ "inhibition/enforcement" can be understood as consequence of the general principle of conservation. The available capacity e.g. of energy is restricted for other applications, if more of the capacity is attributed for a special one.

Such processes should be to expect even in decision making processes.

2.2. The integration of the evolutionary process

We can use the proposal of R. Riedl and of Aristotle to deal with evolution. Aristotle was the first scientist who described the entities on earth with different layers. E.g. Hartmann extended this position according to the stay of knowledge in the 19th century and Rupert Riedl integrated the knowledge of the 20th century in the following graph[7]. I used it to transfer this into a model of a human person as a social being and the integration of all the different levels thanks to discrimination ability

[6] *See*: Sechenov I.M. The reflexes of the brain, in I.M. Sechenov: *Selected works*, reprint Bonset, 1968, 263–336.

[7] Riedl, R. 1978/79. Über die Biologie des Ursachendenkens; ein evolutionistischer, systemtheoretischer Versuch; in: Mannheimer Forum 78/79. Mannheim.

(modified within the evolutionary progress further on into ability to organize for life, ability for emotions for sense oriented intentions and ability for critics for intellectual effects). You see easily: The increasing perforation of the barrel is linked with the increasing youth of the first occurrence of entities with the related characteristics (see *Fig. 1*).

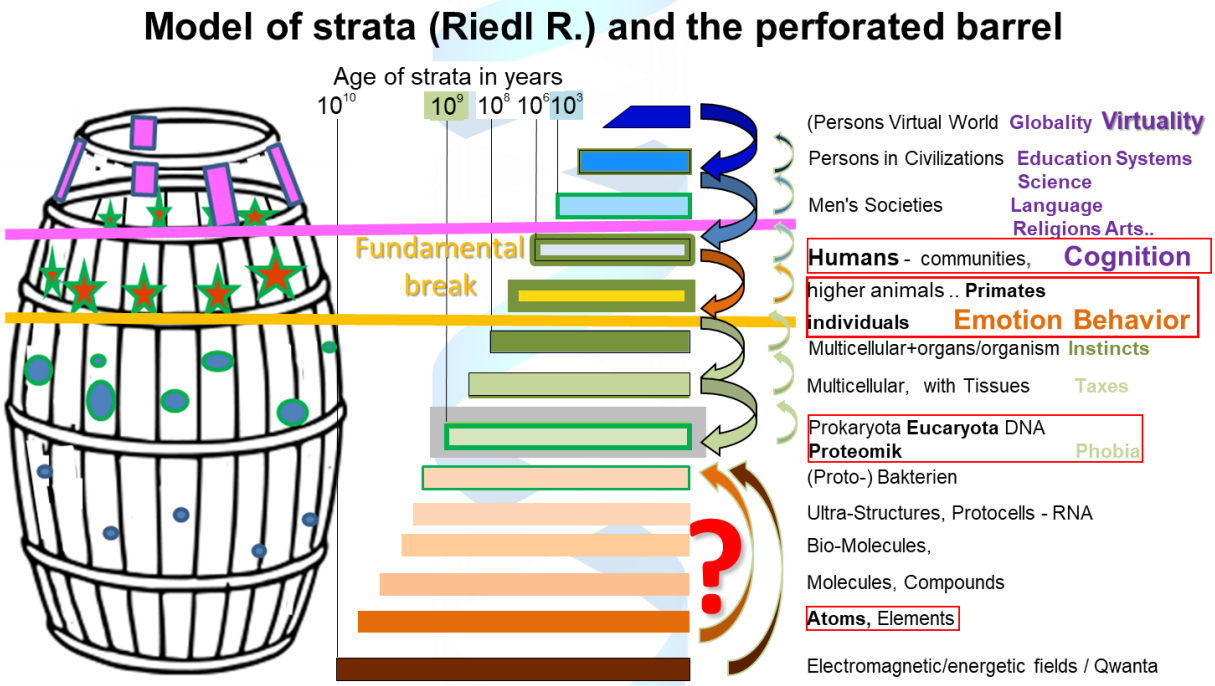


Fig. 1. Model of strata (Riedl R.) and the perforated barrel

Focus your interest on the fundamental break: The related self-understanding of an entity with the intention to be in a subjective relationship to another and not only to purpose orientation is linked with the loss of causality – thanks to its transfer to be an individual related to another individual. And the ability to create abstract assumptions about intentions and ideas ("construct – constructions"[8]) thanks to ability for critics causes individual personality. This is the level which cannot be handled with causal conclusions which are based on observables. But empirical data are the prerequisite for the power of physics and chemistry.

But we have to respect: Each bodily reaction is based on the function of a cell thanks to proteomics and genomics finally. But we do not have sufficient information about the linkages between the levels and their feed backs to the guiding centers on a causal level.

Aristotle has seen these differences: He created the three worlds of entities on the level which could be observed and recognized: The world of the not living ones (physics and chemistry), the world of living animals and the world of humans = if

[8] *See*: Kofler W, Puritscher M. A follow-up of constructs, constructions and realisation for a constructivist interpretation of evolution and the uncertainty relationship. In: van Dijkum C., de Zeeuw G., Glanville R. *Methodological explorations in constructive realism*. Southsea, Amsterdam: BKS+, ISBN 0-9525046-2-6, 1998: 103–116.

entities with emotions and intellectual activities. This world is based on that what is distinct from the others thanks to borders of the fundamental break: No living ones did not reach the next level of life, animals reached – in his understanding – not the level of "the other side" of that what I describe with the "fundamental break". But all entities are limited in their effectiveness also thanks to their ancient older levels up to their physical nature.

2.3. Supporting the model through the Aristotelian science

I focus in this paper just on two aspects: The proposals of Aristotle of "four types of causation" and of "potentia".[9]

3. TO THE SUPPORT OF ARISTOTLE'S AETIOLOGY

3.1. Four types of causation

Aristotle distinct between four types of causes (which can appear in different forms) for the occurrence of processes.

a) *Causa materialis*
b) *Causa formalis*
c) *Causa efficiens*
d) *Causa finalis*

The four causae have to be seen as dynamic interlinked: The available tools (materials in special form) are often prerequisites for applicable intentions – if e.g. the person is able to use this tool and if the surroundings (environments) are adequate. The most fundamental prerequisite for intentions is the evolutionary level in the general and the related individual characteristics of the actor. These aspects should be discussed in detail with the focus on the evolutionary process. And we have to expect that all types are respected in any causation: consciously and unconsciously. But we have to respect "Sechenov and Pavlov" too.

3.1.1. Comparison of the traditional understanding of causation ("normal science" according to Th. Kuhn) and the application of four causes

I will demonstrate the differences of the two techniques and their compatibility with two examples: First Malaria. Then I compare the standard position with the ongoing on the basis of Aristotle. Then I apply the conclusions for a second example: my overweighed friend Peter.

3.1.2. The example 1: Malaria

The traditional understanding is based just on empirical phenomena: The mosquito transfers with a bite the parasite (Plasmodium falciparum) into the blood. The parasite reaches the liver and reproduces there the offspring. They infect red blood cells and destroy them. This causes the disease. There is no *final causeCausa*

[9] The content of terms is modifying within the times. I use them with a focus on the 21st century. So the term "potentia" is used in an extended understanding: It covers also aspects which Aristotle attributed to his "entelechy": So the actual and the dynamic aspects are integrated within the meaning of "potentia".

efficiens is also summarizing in the implicit assumption: Anopheles and their offspring are able to do this

Aristotle would be much more explicit.

a) The mosquito is our actor and starts the process: The (dominating) Causa materialis for the step "from outside to inside" is the parasite Plasmodium Malariae, its *causa formalis* the proboscis (= the "hollow needle" to sting the skin and to suck the blood). Its *causae efficiens* are two types of ability of the mosquito: One is to use its energy and morphology to fly, to make a whole into the skin, put saliva with the plasmodium into the hole, etc. The other one is to recognize the potential host, to guide its movement into the correct direction etc. We attribute to the mosquito as "*causae finalis*" the intention to survive and to support the growing of the offspring.
b) Now we reach the second step "from inside to disease" in a long follow up of causations. Now the parasite (Plasmodium falciparum) is the actor. It was "simplified" as *causa materialis* in the first step above. Its *causa materialis* would be the molecular structure which fits to the related cell of the liver. Its *causa formalis* would be the structures to enable the parasite to pass into the lever cell and to interact with the related substructure of the cells, its *causae efficiens* would enable the movement and guidance to the related structures and interactions, the *causa finalis* would be again the reproduction of "offspring".
c) The offspring can be used as starting point for the next cascade with the – health related – unintended final result of the attack with fever.

3.2. Compatibility of the "Extended View" with "Normal sciences" – additional offers and demands

So the follow up of causations according to the proposal of Aristotle is in full agreement with the stay of knowledge in the related sectoral scientific disciplines. But there are also additional and relevant wins:

- The proposal of Aristotle includes the generalizable aspects of the "single cases": Each single case needs a single actor and his intention. But common natural sciences exclude to attribute finality outside of intentions of scientists and persons. This cause the exclusion of the single case. We will discuss this later – with respect to Aristotle.
- The proposal of Aristotle is based on a comprehensive understanding of "*causa efficiens*". It covered as well the ability to realize thanks to energy as the ability to construct for what and in which intensity and direction the realization should be done. The common position excludes the explanation thanks to what abilities the processes are running. We will discuss this also later – with respect to Aristotle.
- The proposal of the principles of "inhibition/enforcement" and of "conservation" are implicit enforced by Aristotle

3.2.1. *Example 2: High blood pressure and CHD – an additional type of* causa finalis

The *causa finalis* of my overweighed friend Peter to eat too much are not to survive or to take care for his children. Maybe the real reason is the acrimonious divorce of his loved Mary. Or was it the neglection of his friends after losing his position as president of the rabbit keeping association? But the key problem of overweight is a biological dysfunction: his high blood pressure. And drugs can be developed against the biological dysfunction – but not against the reasons for the voting out in the NGO and without any effect on his relationship to Mary.

So the good medical doctor has to deal with the ability of Peter to attribute meaning to processes, to options, experiences etc. and the fact that meaning and values can be influenced. But there is no equivalent in natural science for the ability to attribute meaning to structure, observations etc. to the different types of energy. Aristotle integrated both into his worldview.

3.3. Potentia

Aristotle introduced the term "potentia" for any type of ability to be effective. Even scientists are restricted and have to focus on one aspect with the consequence to neglect (temporarily) others. Therefore it makes sense to focus distinct on two different aspects of this unique potential[10]:

a. To be able to modify the position within a "Euclid-analog" geometrical grid. ("movement") and
b. To attribute and modify meaning to structure ("information") within a grid of meaning
c. Both grids are interlinked – as we know e.g. from the "language of the bees. They can communicate thanks to movement of its body.
d. Each aspect can initiate to focus on the other aspect.

3.3.1. *Substance monistic position – no mind-body dilemma*

Substance is the term which is used to name this which remains unchanged after a modification. You can accept just one substance as "carrier" of this "potentia". Then you prefer a substance monistic model – in contradiction to the substance dualistic model of Descartes. My "Extended View" is based in a substance monistic view. The body-mind dilemma disappears if you shift from a substance dualistic model to a substance monistic understanding. Then a person is not understood as consisting of two in principle different substances – body and mind – but just from one substance which **enables** the person to bodily, mental, etc. efficiencies and properties.[11]

[10] This is done with linkage to the Extended View".

[11] Aristotle interpreted the relationship between body/matter and mind/entelechy with the relationship between matter and form. Therefore this was compatible with the assumption that on earth is just one substance.

3.3.2. *Where is the causation for information?*

The application of potentia which is described above under a) is commonly accepted in "normal science" and named "energetical field, electromagnetic field, gravitation, power" etc. Its output is named "movement".

There is no special term for the application of b), just for its output: It is named "information".

3.4. Comprehensive simplicity and the need to introduce a term

It is mandatory to focus on the actual relevant. But there is the implicit danger to oversee relevant aspects. Therefore I claim to accept the "comprehensive simplicity": We must be able to communicate all distinct what can be overserved or thought logically as different. We have to introduce a scientific term, if this is not possible because of a lack on terms. A scientific term "stays" for anything in our world. It makes only sense to introduce a term, if it is possible to confirm his additional power empirically or logic. Therefore there is a need to characterize the term adequately for empirical and logic proving.

Therefore I had to introduce a term for the aspect of the potential which enables to attribute information to energetical structures.

I will demonstrate this on an example (see: *Fig. 2*):

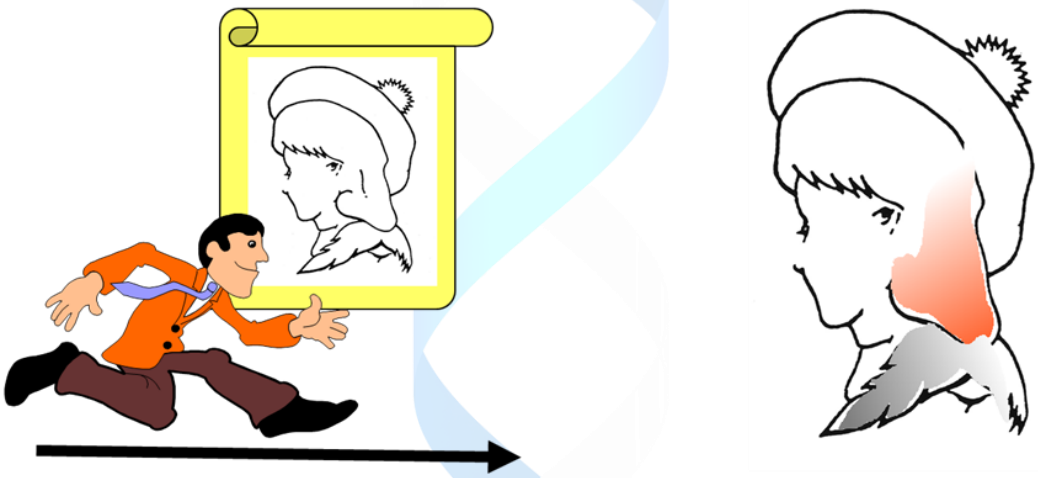


Fig. 2. Guidance of movement.

Do you see the young man moving the picture to the other wall? It is easy to understand this process as well with normal science as with Aristotle. The young man is our actor. The muscles are the *causa materialis*, their contractibility is the *causa formalis* and to reach the new position is the *causa finalis* – as in normal science. But the classic explanation would have a problem: Where is the sufficient cause for the guidance of movement?

3.4.1. *The need to introduce an additional term: "discrimination ability"*

Now look at the picture. How many faces you can recognize? Young men have problems to see the old lady, but nearly all see the young girl. I can help you with verbal explanations. Or to add colors to the picture. Then it is easy even to distinct

the old man. It is obvious: I can teach you – You could learn. This cannot be explained sufficiently with physical energy. Therefore we need an additional term in equivalence to energy. I proposed "discrimination ability".

3.4.2. *The need to characterize that "for what the term should stay and its empirical proving"*

This small demonstration allows formulating characteristics for testing of the hypothesis. I use just one. The available amount on this ability has to be limited. If this is so then a lack on this ability in the organism should cause negative health effects. I could confirm these predictions e.g. in the mortality distribution of victims of Chernobyl, after environmental disaster[12] and especially of Hiroshima and Nagasaki[13] (see: *Fig. 3*).

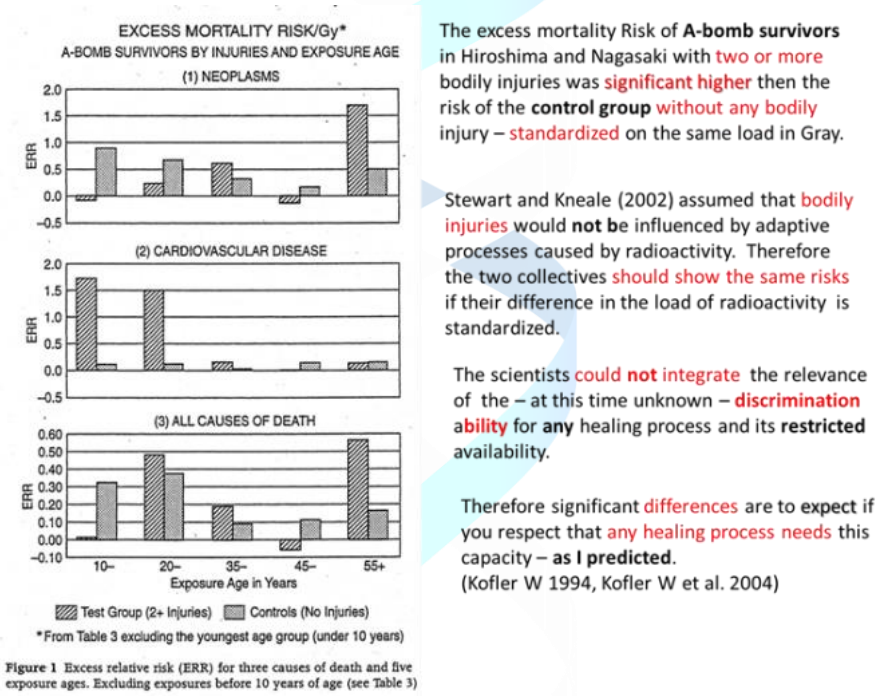


Fig. 3. The excess mortality Risk of A-bomb survivors in Hiroshima and Nagasaki

The excess mortality Risk of A-bomb survivors in Hiroshima and Nagasaki with two or more bodily injuries were significant higher than the risk of the control group without any bodily injury – standardized on the same load in Gray. Stewart and Kneale assumed that bodily injuries would not be influencing the adaptive processes caused by radioactivity[14]. Therefore the two collectives should show the same risks if

[12] *See*: Kofler W. Health effects of environmental disasters and the need of a more complex model of man. In: Y. Steinberger, Ed. *Preservation of our world in the wake of change*, Vol. VI A/B. Jerusalem: ISEEQS Pub., 1996: 275–282.

[13] *See*: W. Kofler, P. Lercher, and M. Puritscher: The need for sufficiently taking into account unspecific effects in the understanding of health risk: Part1, 2, 3: IUAPPA and Korean Society for Atmospheric Environment, Seoul, (on CD-Rom), F 0245c, 2001.

[14] *See*: Stewart A., G. Kneale: A-bomb survivors: factors that may lead to a re-assessment of the radiation hazard, *Int. J Epidemiology*, 2000, 29, 708–714.

their difference in the load of radioactivity is standardized. The observed differences should be to explain with a special selection of persons with an inborn resistance against radioactivity.

The scientists could not integrate the relevance of the – at this time unknown – discrimination ability for any healing process and its restricted availability. Therefore significant differences had to be expected if you respect that any healing process needs this capacity – as I predicted.

3.4.3. *Ability for discrimination and ability to use energy – expressions of just one potentia*

It is easy to demonstrate that discrimination ability and energy are just two expressions of the same (Aristotelian) potentia: No movement without direction, no information without a structure.

3.5. Intelligent design or *Causa finalis*?

I have spoken above from the need to speak about the background of the fact that normal science skips the single case in consequence of the exclusion of *causa finalis*. This ongoing can be seen as starting point to skip also the explanation for the sufficient integration of *causa efficiens*.

Natural scientists hate *causa finalis* often. They do this because of the intention to exclude any risk to be accused to use religious arguments in their scientific argumentation because of teleology. The same intention is exactly the reason why I prefer *causa finalis* and a comprehensive understanding of potential: Traditional scientists have to let open in consequence of the neglection of *causa finalis* very often also "*causa efficiens*": If you exclude an actor then you cannot attribute efficiencies to him or to anything. Modern scientists assume maybe that there is no need: "Natural laws", the nature, "evolution" and other terms should represent, why all the natural processes are "running so well organized". ("I think you should be more explicit there in step 2") But what is "behind" – if not the individual actors with their restricted but modifiable potentials before the emergent step?

3.5.1. Newton: Natural laws and the first mover

The position of normal science seems to be sufficient if it is based on a philosophical conclusion of Newton. He was a well-known religious philosopher at his time. He had the problem to integrate his discovery of gravitation into the historic ontological position[15]: Gravitation works without any observable linkage between the mover and the moved. This was in contradiction to the stay of knowledge at his time. Therefore he created a new understanding of god as creator of the world. He introduced – in difference to Aristotle and the scholastic – the understanding of God as the first mover using his physical power.

God is the cause for the ideal movement of the divine stars and planets also for Aristotle, but not because of a physical activity of God. The observed happiness of the ideal self-reflection of God is the reason that the stars are stimulating themselves

[15] *See*: Newton I. *Mathematical principles of natural philosophy*: General Scholium. 1713.

to ideal movement: God motivates the stars similar as a loved person is stimulating the lover to reach him/her – proposed Aristotle[16].

Newton linked this physical act with the creation of the universe: God created at the same time the universe with all its structures and forces – including gravitation – and the ideal natural laws. This was in good agreement with the substance-dualistic model of Descartes. All is pre-determinated without the logic decision of the (male) humans: God is able to link even not linkable substances thanks to his omnipotence. And God is doing this permanently in the pineal gland of humans only.

Heisenberg and other quantum physicists excluded the predictability of the single cases because of uncertainty relationship.

Einstein relativized the use of forces on classical physics: Fields are needed to deal adequately with the universe.

3.5.2. *Newton´s position is falsified or relativized*

But the philosophical and religion based assumption of the ideal eternal natural laws and their ideal consequences including the evolution persisted Therefore such terms like "evolution", "nature", "autopoiesis" etc. lock so as they allow to let the actor open. But such a scientist is in danger to accept implicit intelligent design or similar models, if he excludes not temporarily but in principle the option that the existing entities are able and have been able to cause the processes – even such one which cause the evolutionary process (Fig. 4):

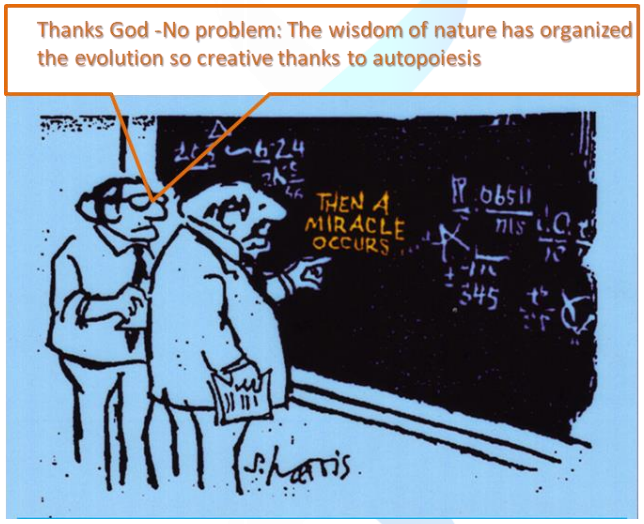


Fig. 4. Transcendent design and autopoiesis.

4. TERMS, SYMPOLS, FORMULAS, NATURAL LAWS, ETC: JUST FREE INVENTIONS OF THE HUMAN MIND

The widespread use of e.g. "evolution" as causer encourages us to discuss about the nature of terms – or of common words. Scientific and common terms and natural laws are free inventions of the human mind. A. Einstein. The map is from another nature, ….as the landscape.

[16] *See*: Höffe O. *Aristoteles-Lexikon*, Kröner Nr 459, Stuttgart, 2005.

Ferdinand de Saussure[17], the founder of modern linguistic and semiotic understands language as a system of signs about e.g. objects. Therefore signs are not only "anything others". They have to skip a lot of, what can be relevant for the nature of that for what they stay.

"This is not a piper." This picture is a sign and "stays" for a pipe! And the word "pipe" is also a sign. Words and other signs make "a more or less long story short". The story can deal with characteristics of an entity, e.g. this pipe. But it can summarize also e.g. interactions between entities and their relationships and processes (see *Fig. 5*).

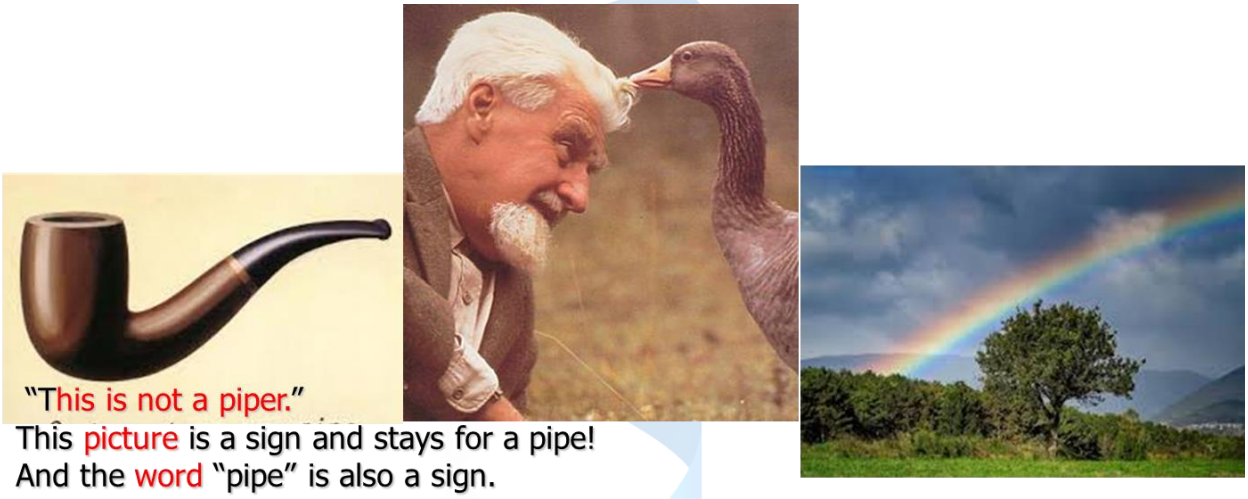


Fig. 5. "This is not a piper"

It is relevant for our discussion about natural processes: Substantives need not to stay all the time for real existing entities. "Konrad" and "Martina" stay for my existing friend and his gray goose. The content of a substantive can cover complex processes and the related objects. Therefore we can discuss: Does the rainbow exist – as Konrad? Or stays this term to summarize the complex process of the refraction of the (existing) light thanks to drops of (existing) water?

But there is no discussion: "Evolution", "nature", "autopoiesis" do not exist – cannot have any effect. These terms allow only communicating very long stories between existing entities on a scientific position with one word.

5. PREDICTABILIY AND ITS LIMITS: THE METAPHOR OF CHESS

The presented chain of argumentation lets open a relevant aspect: How can we make plausible what can be predicted and what not. I hope I can make plausible this with chess as metaphor.

5.1. Inhibition/enforcement and WIN/WIN as basis for emergent progresses

Recognize the game chess: There are endless options for figures and playing fields which can be made from wood or stone. There is no logic reason to

[17] *See*: Saussure F.d. *Cours de linguistique générale*, (Charles Bally and Albert Sechehaye, eds.), orig. 1916, De Gruyter 1967.

inhibit/exclude all the different options and focus/ enforce just the option of 8 to 8 fields in black and white and the structure of the different figures. The same with the theoretically unlimited options for processes which could be done with figures.

The voluntary abstinence of options and agreements create emergent new types of freedom for all sharing the "subunit-constituting consents"

But chess-players have good reasons to skip all other options and focus voluntarily just on these two types of consents for the structure and the processes: The combination of them opens an emergent new variety of options for meaningful movements for any member of the "new subset of persons"Every chess-player wins the freedom to select individually options for movements but within the given frame of rules. There is no hidden law to decide in a given constellation to apply this and not another correct move. It is remarkable that there are two types of win: The win to play and the option to be the winner. But the prerequisite for both is to share these options with others. So WINWIN is the principle of this evolutionary progress.

Chess describes exactly the situation which Voltaire described: A situation in which "*one part is well-regulated in advance, the other not," and a part of that what happens, has to happen, the other not."*

5.2. Two types of consents: Inside oriented – outside oriented – for one intention

Any chess player knows[18]: If you are observer of two persons playing chess, then you have to be quite and have to respect an adequate distance to the players. They should be able to focus their concentration undisturbed to their game. This demonstrates: We have to accept two types of consents: A quite simple consent for the "outside relationship" and more differentiated consents for the "inside relationship".

And both agreements should allow optimizing the new type of surplus which is the consequence of these voluntarily accepted restrictions: To have the win to play chess and the option to be the winner.

The prerequisite for this new understanding of evolutionary process is to accept actors which are not only able to move thanks to energy a figure but are able to attribute meaning to the position of figures according to agreements and to anticipate possible consequences of the own movements.

And a special issue (for future) is to present the linkage to the genetic based evolutionary process (based on Darwin's ideas). Same of that is discussed in Part 1.

5.3. Potentia – comprehensively understood?

Even normal science on the basis of a radical empiricist has to accept that scientists must be able to deal with information. "Conclusions" are not observable, but indispensable for the work of scientists. Therefore even an empiricist has to attribute a comprehensive "potentia" (minimum) to himself. We attribute "potentia" not only to scientists, but also to our patients, medical doctors and other health care workers.

[18] *See*: Kofler W., E. Khalilov. An attempt to integrate the Relativity Theories into a comprehensive health oriented model, *Science without Borders*, Vol IV, Baku Innsbruck, in press.

Medical doctors have to attribute even to any single cell to be a "restricted autonomous actor". Therefore a wound is healing even during artificial sleep and cells e.g. of a tissue can be used for cultivation outside of the body. More and more persons accept that even their dogs, cats and horses are able to attribute meaning to structure and processes. It is impressive how effective microbes – e.g. Escherichia Coli – can organize themselves, e.g. for reproduction. Cairns-Smith illustrated this with the comparison of the time, which would be needed by humans, which are able to fit 12 atoms in one minute on the correct position. 1000 workers would need 35 years if they are active 8 hours daily. They would need a space as large as the Basilica of Colonia. E. coli is able to reproduce itself within 30 minutes – without any crash or mistake and no waste.[19]

Microbiologists publish phenomena which have to be based implicit on a comprehensive potential even for anticipation – but even on a very basic evolutionary level: So the German Research Society pointed out that simple soil microbes of the species Myxococcus Xanthus cooperate in hunting other microbes "like a pride of wolves"[20].

Nobel Laureate Heisenberg proposed to attribute the Aristotelian Potentia also to quantum objects, e.g. particles.[21] Therefore we should not expect any loss of power in comparison to the "standard situation", if we use the proposed position for applications e.g. in medicine. But our position allows dealing more appropriate with the background of "experience" and "empathy". The "experienced" doctor is able to integrate the consequences of learning processes of patients in comparable settings. Chess-player and patients are able to learn successfully options within the rules – again thanks to their "potentia". "Empathy" is based on the quality of the doctor to "think with the head of his patient" and to anticipate his individual valuation in a special situation.

6. CONCLUSIONS

The use of the Aristotelian "four types of causation" and of "potentia" for energetic and information related effectivity within a substance monistic position allows to integrate single cases on a scientific level. This has to be linked with a generalized principle of "inhibition-enforcement" of Sechenov and Pavlov and to accept the principle of conservation generally. The proposal of this "Extended View" "fits" to the actual used scientific frames which focus on the generalized aspects. The proposed Extended View allows a better understanding of some reproducible phenomena, which cannot be made plausible on a causal level without an implicit basis of a pre-determinated model e.g. of intelligent design.

---

[19] *See*: Cairns-Smith AG: *Seven clues to the origin of life*, Cambridge University Press, 1985.

[20] *See*: Velizer GJ, NY Yuen-Tsu: Evolution of novel cooperative swarming in the bacterium Myxococcus Xanthus, *Nature*, 425, 4.9.2003 M. Planck Gesellschaft, Inst. f. Entwicklungsbiologie, Aussendung 4.9.2003.

[21] *See*: Heisenberg W. *Physics and Philosophy*, Harper Brothers, NY, 1958.

References

Cairns-Smith A.G. (1985). *Seven clues to the origin of life*, Cambridge University Press.

Heisenberg W. (1958). *Physics and Philosophy*, Harper Brothers, NY.

Höffe O. (2005). *Aristoteles-Lexikon*, Kröner Nr 459, Stuttgart.

Kofler W. (1996). Health effects of environmental disasters and the need of a more complex model of man. In: Y. Steinberger, Ed. *Preservation of our world in the wake of change*, Vol. VI A/B. Jerusalem: ISEEQS Pub.: 275–282.

Kofler W, Puritscher M. (1998). A follow-up of constructs, constructions and realisation for a constructivist interpretation of evolution and the uncertainty relationship. In: van Dijkum C., de Zeeuw G., Glanville R. *Methodological explorations in constructive realism*. Southsea, Amsterdam: BKS+, ISBN 0-9525046-2-6: 103–116.

Kofler W., Lercher P., Puritscher M. (2001). The need for sufficiently taking into account unspecific effects in the understanding of health risk: Part1, 2, 3: IUAPPA and Korean Society for Atmospheric Environment, Seoul, (on CD-Rom), F 0245c.

Kofler W. (2012). Epistemological and ontological tools for an Extended View of a human person as a social being and its environments, part 1: Considerations about ontological and epistemological options and restrictions, *Biocosmology – Neo-Aristotelism*, 2 (4): 273–292.

Kofler W. (2018). Pfizer ends Alzheimer-Research: An Emergency Signal for Medicine and Politics, *Herald of International Academy of Sciences*, Russian Section, 1: 56–62.

Kofler W., E. Khalilov: An attempt to integrate the Relativity Theories into a comprehensive health oriented model, *Science without Borders*, Vol IV, Baku Innsbruck, in press.

Kuhn Th. (1962). *The structure of scientific revolutions*, University of Chicago Press.

Newton I. (1713). *Mathematical principles of natural philosophy*: General Scholium.

Riedl, R. (1978/79). Über die Biologie des Ursachendenkens; ein evolutionistischer, systemtheoretischer Versuch; in: *Mannheimer Forum*, Mannheim.

Saussure F.d. (1967). *Cours de linguistique générale*, (Charles Bally and Albert Sechehaye, eds.), orig. 1916, De Gruyter.

Sechenov I.M. (1968). The reflexes of the brain, in I.M. Sechenov: *Selected works*, reprint Bonset: 263–336.

Stewart A. & Kneale G. (2000). A-bomb survivors: factors that may lead to a re-assessment of the radiation hazard, *Int. J Epidemiology*, 29: 708–714.

Velizer GJ, NY Yuen-Tsu (2003). Evolution of novel cooperative swarming in the bacterium Myxococcus Xanthus, *Nature*, 425, 4.9.2003 M. Planck Gesellschaft, Inst. f. Entwicklungsbiologie, Aussendung 4.9.

THE FORTIETH ANNIVERSARY OF THERMODYNAMIC ONCOLOGY

Dariusz JASICZEK[1], Marek KLIMEK[2]

СОРОКОВАЯ ГОДОВЩИНА ТЕРМОДИНАМИЧЕСКОЙ ОНКОЛОГИИ

Дариуш ЯСИЧЕК и Марек КЛИМЕК

Abstract. Discovery of natural thermodynamic cause of cancers links neurohormonal époque of medicine with thermodynamic oncology through two publications in 1978 about firstlings neuroendocrinologic and then dissipathogenic cervical carcinogenesis. Human life is distinguished by the verbal ability of assessing the state of personal health and socio-economic environment. An intrinsic quality of human ageing is the growing up loss of strength and well-being, what defined as thermodynamic entropy, e.g. the kind of feeling of increasing ease of fatigue as a person grows older. The well-being of the patient is the highest medical goal and the prohibition of causing harm to humans encompasses not only the medical, but all human conduct due to the natural ageing of human cells. Only after nuclear magnetic resonance imaging technology was introduced it is possible to view a three-dimensional image of a cell's inner state before aggressive and often irreversible changes occur. Self-organization of cellular forms also applies to a person's psychological and social life in the form of newly described informative disease (informatonosis). Many body cells die all the time to ensure that the organism survives. Life of a cell may be saved through self-reorganization of its genome, but it must enhance dissipation of matter and energy in its closest environment. It is the dissipation that causes the signs and symptoms of neoplastic diseases ending with destruction of the body if the treatment comes too late and/or is insufficient, limited only to removal of neoplastic lesions without the always necessary elimination and/or prevention of preneoplastic (dissipathogenic) states.

Keywords: Information rays, Cancer cause, prevention and therapy, Life, Infertility, Informatonosis, Entropy, Biocosmos, Nucleomagnetic resonance and imaging.

Contents

Introduction

1. Medicine – an applied science and art
2. Oncology in Cracow Jagiellonian University
3. Immunoprevention and therapy of carcinogenesis

Conclusions

[1] World Information University, Krakow, POLAND.
[2] Jagiellonian University, Krakow, POLAND.

Резюме. Открытие естественной термодинамической причины рака соединяет нейрогормональный период в развитии медицины с термодинамической онкологией, в первую очередь посредством двух публикаций в 1978 году: о первых нейроэндокринологических результатах; и затем о диссипатогенном канцерогенезе шейки матки. Человеческая жизнь отличается способностью оценивать состояние личного здоровья и социально-экономической среды в словесной форме. Внутренним качеством старения человека является растущая утрата силы и благополучия, что определяется как термодинамическая энтропия, и проявляется в ощущении быстрой утомляемости, по мере того как человек становится старше. Благополучие пациента является высшей медицинской целью, а недопущение причинения вреда людям распространяется не только на медицинскую сферу, но и все виды человеческого поведения, тем более что обусловленного естественным старением человеческих клеток. Только после того, как была введена технология создания ядерного магнитного резонанса, стало возможным видеть трехмерное изображение внутреннего состояния клетки до возникновения агрессивных, зачастую необратимых изменений. Самоорганизация клеточных форм соотносится также с формами психологической и социальной жизни человека, и здесь может проявляться в виде недавно описанного информативного заболевания (*информатоноза*). Многие клетки тела умирают в запрограммированной форме, но это делается для того, чтобы организм смог выжить в целом. Жизнь клетки может быть спасена путем самореорганизации ее генома, и что реализуется в усилении диссипации вещества и энергии в ближайшей среде. Эта диссипация, которая вызывает признаки и симптомы неопластических заболеваний – завершается разрушением организма, особенно если лечение осуществляется слишком поздно, и/или – если ограничивается только удалением неопластических поражений без (всегда) необходимой элиминации и/или профилактики предраковых (диссипатогенных) состояний.

Ключевые слова: информационные лучи, причина рака, профилактика и терапия, жизнь, бесплодие, информатоноз, энтропия, Биокосмос, ядерно-магнитный резонанс и визуализация.

Содержание

Вступление

1. Медицина – прикладная наука и искусство

2. Онкология в Краковском Ягеллонском университете

3. Иммунопрофилактика и терапия канцерогенеза

Выводы

Introduction

Historic discovery of natural cause of cancers links neurohormonal époque of medicine with thermodynamic oncology through two publications in 1978 about firstlings neuroendocrinologic and then dissipatogenic cervical carcinogenesis[4,6,8,15,16,18,20].The most valuable for human life is medicine, because it is practical art simultaneously studying and helping human health and procreation [en.biocosmology.ru/electronic-journal-biocosmology-neo-aristotelism]. Modern technologies armed physicians with a toolbox for monitoring human health at molecular level, including diagnosis of 284 diseases /www.biobohemia.ru/. Now ultra-high-resolution spectrometry enables measurement concentration of 5000 blood substances from the use of dried blood spot sent by mail to reveal abnormalities on the human metabolic pathways regarding organism state at molecular level, using e.g. flow cytometry of 20 parameters per cell at rate of tens of thousands of cells per second. Nevertheless the metabolomics results to give information required for the medical interpretation of detecting abnormalities. This obliges people to continuously track the progress of both general knowledge and its technological use, including the introduction of purely informational diseases. In this course, for instance, lies, telling untruths, or concealment are treated as an adequate cause of diseases, which destroy motivated human behavior. For example man instead of the exchange of products and services for money (coins) unfortunately began to use only information of their values, but through the life and work of individuals, money indirectly still is associated with substantive information. In social life if one does not know what is going on, it is usually due to money and power as information. Between the sender of information and its recipient as well as the source of information and the place where this information is used, there is a kind of resonance as the essence of animate or inanimate things, only people forgot that in every cause there is precisely this image of the plan, what this cause will precipitate. In relation to man his life is distinguished by the ability of assessing the state of personal health and socio-economic environment, e.g. the kind of feeling of increasing ease of fatigue as a person grows older. An intrinsic quality of human ageing is the growing up loss of strength and well-being, what defined as thermodynamic entropy, which also occurs in other natural phenomena.

1. Medicine – an applied science and art

Despite the passage of 40 years since the discovery of the thermodynamic cause of neoplasms, many doctors still do not apply the new rules in the treatment. Determining the types of medical specializations in the European Union, oncology was rightly not left out of the primary medical fields, apart from widening the field of radiology by including oncological radiotherapy. The well-being of the patient is the highest medical goal and the prohibition of causing harm to humans encompasses not only the medical, but all human conduct due to the natural ageing of human cells. Only after nuclear magnetic resonance imaging technology was introduced it is

possible to view a three-dimensional image of a cell's inner state before aggressive and often irreversible changes occur. Self-organization of cellular forms also applies to a person's psychological and social life in the form of long known neuroses or psychoses and newly described informative disease (informatonosis), illness based on the fact that its source applies to self-awareness in a social environment, from which harmful information originate, e.g. when doctors prematurely perform a cesarean section solely on the basis of the patient's wish contrary to the medical indications. In these cases the doctors interrupt the natural development of the child, even though they simultaneously recognize such action as wrong in their statements. This illness can also be caused by abandoning the hitherto successful methods of monitoring the intra-uterine development of the child. The existence of such an informational illness is shown by the increased risk of a change of the physiological progress of the pregnancy into pathological obstetric incidents. Universe (Biocosmos) is the informational four-dimensional spacetime whose quintessence is information rays and patterns of quantum equivalence of matter, information and energy from emergence to transcendence, and vice versa! Everybody looking at the mirror can see his/her picture which do not have even one atom of only visible person, because it appears as resonance of information pattern (informgraph) of this place (mirror) where the coming from real object (man) information rays meet together with the rays having the identical features (the same amplitude of waves), but coming from eyes directly or by other mirrors. The essence and existence of information rays or patterns can be demonstrated by performing the informational experiment documented the sight's nature. It is sufficient to look at two-dimensional portrait of man (as real object) from three locations: *en face*, and then at the same distance from left and right side doing simultaneously three photographs. On each of them the head of man is seen as "turned" towards the place of observer or photocell. So, one personal real picture exists as three different informgraphs. The observable beings refer to the capability to detect not only light, but first of all the information rays coming from any object, what is called "pattern formation" [8,20,24,26,27,32].

Now information means a basic quantum part of the cosmic informational field for every natural structures or processes. For example many carcinogenic factors were described, including naturally occurring genes, which were even given a name 'oncogenes'. In 1971 was announced that incidence of cancer would be reduced by half before the end of the 20th century and later would be eliminated, what only increased the fear of the disease. What more, despite the similarities of thermodynamic pathogenesis between cancer and infertility the both diseases were not expected to have the same natural cause, which is why there were attempts to assign an individual source to each of them. Many cells as microsystems die all the time to ensure that the organism is alive despite the impact of ageing processes and pathogenic stimuli, but the end of their individual life may be in exceptional cases prevented by self-organization into a new system. Life of a cell may be saved through self-reorganization of its genome by changing the matter of its own non-functional

organelles into energy and such a new cancer cell may still exist, but it must enhance chaos (dissipation of matter and energy) in its closest environment. This universal phenomenon in nature, discovered by Ilya Prigogine (Nobel Prize 1977) was used by Rudolf Klimek to explain the reason for formation and diversity of neoplasms as a result of statistically conditioned processes [23,25,29,30,31,49].

2. Oncology in Cracow Jagiellonian University

The thermodynamic theory of carcinogenesis was confirmed when Nuclear Magnetic Resonance imaging was introduced in medicine, being an outcome of one-hundred-year-long studies at the Jagiellonian University in Cracow, firstlings presented for the international evaluation of the paper *Etiopathogenesis of tumors and theories of oncogenesis* [18,19,28,38-41,47]. In 1906, professor of the Jagiellonian University Marian Smoluchowski described the foundations of the kinetic theory of matter and stochastic processes known as the Einstein-Smoluchowski's fluctuation-dissipation theorem, thus explaining the role of thermal fluctuations in optimisation of the functioning of living systems and dispersion of light in opalescence [51]. This thermodynamic depiction of events in the morphology-dominated medicine initiated a new direction for function tests, even though at that time R.Virchov's cell theory of the structure of man was not fully accepted. In 1942 B. Skarżyński and the Noble Prize winner (1929, in chemistry) H. von Euler-Cheplin wrote book *Biochemie der Tumoren* (F. Enke Verlag, Stuttgart, translated to Italian in 1945. La biochemica dei tumori, Einaudi, Torino), which initiated the biochemistry era in oncology [5,20]. Their statements that a "*cancer cell is a mutated cell and diet creates favourable conditions for development of cancer*" along with the suggestion that lifestyle and nutrition helped fight the neoplastic disease! They connected the aetiology of neoplasms with cell nucleus and decided that the gene responsible for heredity is a nucleoprotein, but at that time its exact structure was unknown.

Between 1953 and 1955, B. Skarżyński generalized his own oncological views in papers "Chemism of carcinogenesis" and "Biochemistry of Neoplasms," stating that:

> All attempts to identify in neoplasms a specific chemical compound, typical only of a neoplastic cell and absent in a normal cell, have failed. The differences between a normal tissue and neoplasm are only quantitative rather than qualitative.... A significant moment in the transformation of a normal tissue into a neoplastic one is such damage to cells that does not make the cell unable to live but that is sufficient to alter its metabolism in a specific way. According to these facts accumulated by biochemistry, carcinogenesis would be a response of a normal tissue to continuously repeated minor damage, to unfavourable environmental conditions created by a carcinogenic factor [45, 50].

These statements could be fully explained only at the level of biophysics, what became evident latter.

Between 1957 and 1967 B. Skarżyński's pupil R. Klimek introduced treatment with natural hypothalamic hormones to medicine, explaining also the neuro-endocrinological causality of cervical cancer; among others he described a different reactivity of blood vessels to those hormones in neoplastic and preneoplastic cervical states and the frequent clinical postpartum hypothalamic insufficiency as a factor predisposing to neoplastic lesions [43,44,46]. Now neurohormonal therapy is a systemic treatment method against neoplasms and preneoplastic states. Thank to that in 1977 he explained the dissipative state of cell [4,6,17,20] defining cancer as:

> a natural biological dissipative structure self-organising in the body; if a part of the body (microsystem) is a sufficiently long period in a state far from the biological equilibrium of its environment, and the body as a whole cannot change this state to one that is at least close to the equilibrium, than such a microsystem has an alternative: to die or to choose the lesser of two evils and transform into a new biological structure (a new system), that is a neoplasm. Carcinogenesis is the rarest but the most dangerous consequence of provoked disruptions of the internal state of the system and at the same time a signal warning against the endangered existence of the whole body; prophylaxis of neoplasm ought to involve elimination of all deviations from the equilibrium, especially at the level of the whole body". [Klimek, 1977]

In 1980, R. Klimek together with P. Lauterbur (chemist) and M. H. Mendonca-Dias (physicist) generalized the results of independent studies in a publication about relaxation times of Nuclear Magnetic Resonance in neoplasms within their interpretation as self-organising dissipative structures and their *in vivo* studies interpreted according to the laws of both physics and biology at an atom level in tissues, which can be diagnosed with other methods much later, as preneoplastic states [25, 38-40]. For the first time it became obvious that man is actually built of atoms, even though human senses permit perceiving only colour, sizes, motion, taste, consistency or smell of body parts.

3. Immunoprevention and therapy of carcinogenesis

Similarly to neurohormonal therapy two general directions for immunotherapy of neoplastic diseases arise from the thermodynamic essence of neogenesis: the direct one – targeting neoplasms, and the indirect one – leading to normalisation or sufficient alteration of the environment of the neoplasm. Indirect immunological therapy (immunopotentialisation) from 1985 is aiming to change the biological state of the environment of the neoplasm in which it was formed and which is the only environment in which it can grow and develop [1,21,22,35,42]. Immunopotentialisation therapy of cervical intraepithelial neoplasia involves also the desired cooperation of symbiotic bacteria Lactobacillus vaginalis, which to secure

their own existence compete with bacteria and viruses that are pathological for man. By exchanging plasmids with those, they are a natural source of antigens for activation of human immunity system, also for the protein component of viruses. The problem is that in merely ten-plus percent cervical cancer has a direct causal relationship with infections with too many existing virus and bacteria types. The lactobiomic vaccine was introduced to oncological practice by R. Klimek in 1986 at the II International Symposium of Cervical Pathology and Colposcopy, demonstrated that: "usually used in chronic Trichomonas vaginalis infections, by causing immunopotentialisation of the system [the vaccine] may become a prophylaxis and treatment method in these lesions" [37]. Histopathological test is still a certain and decisive diagnosis of a self-organising dissipative neoplastic structure at a cell level. A breakthrough in this respect involved introduction of tissue imaging with regard to matter and energy using Nuclear Magnetic Resonance, which made it possible to study the cell metabolism of not only neoplasms, but – what is much more important from medical point of view – also cells in preneoplastic states.

Scientists are under the obligation to communicate the truth about cancer according to the general state of knowledge and not only according to the views of oncologists. Over 80% of malignant neoplasms are formed with participation of carcinogens that pertain to mostly human behaviour: lifestyle, diet and behaviour connected with reproduction. The factors contained in the smoke of burnt tobacco condition malignant neoplasms not only in lungs (80-90% in men) but also in the oral cavity, throat, larynx, oesophagus, pancreas, urinary bladder and kidney, and smoking cessation significantly reduces the risk of carcinogenesis. Diet components may have both harmful and protective effects, similarly to physical exercise. Among occupational factors, the highest risk concerns skin, airways, lungs and urinary bladder, but these factors apply to only ca. 5% of neoplasms in men and 1% in women. Current results of epidemiological and clinical trials – in a huge scope, which covers observations of human behaviour at work, school and during leisure in various periods of human life – were presented in the monograph *Gastrointestinal cancer in Poland* by W. Jędrychowski, for years managing an international team comprised of representatives of various fields of medicine, biology, psychology and sociology [3,6,11,34]. For instance, the frequency of the total impact of viruses, other infections and genetic disorders (15%) which are commonly considered as oncogenic factors is lower than that of such important variables as diet (30-35%) and smoking (30-32%)! Analytical and epidemiological studies on gastrointestinal diseases showed the impact of diet, lifestyle, nicotinism and alcoholism on incidence of stomach cancer against the functioning of a whole family that was influenced by many oncological risk factors. Similarly, the factor that plays the primary role in cervical cancer is improper procreation, as evidenced by the same oncological risk factors that lead to preterm births, and in women with postpartum hypothalamic dysfunction preneoplastic cervical lesions are observed in colposcopy tests in as many as 20% of cases and in cytological tests in at least 10% [12-14,48,53,54].

In 2006 in the book *Cancer-neoplasms and neoplastic diseases*, R. Klimek, J.M. Madej and A. Sieroń directly referred to the general biological scientific achievements and traditions of the Jagiellonian University on the 100th anniversary of the beginnings of modern biochemistry and physics. The text of this book includes edited parts of the R. Klimek's monograph entitled *Cancer-cause, determinants and self-defenc*e, of 1985, whose content was supplemented with clinical application of imaging and spectroscopy using Nuclear Magnetic Resonance [26]. Finally, in 2011, S Hodorowicz, D. Jasiczek, R .Klimek and R. Tadeusiewicz presented contemporary oncology in a generally accessible book entitled *Cancer and infertility*. *Truth and myth of medicine* [3]. The purely biophysical cause of cancer cannot disappear as neither can the existence of equally natural phenomena like e.g. lightening. Due to meteorological forecasts, effects of this dangerous phenomenon have been largely reduced through use of constantly improved lightening conductors. When it comes to effective fight with cancer, the hopes focus on detecting and/or delaying the dissipathogenic states, well known as preneoplastic states, and on strengthening the natural protection of a sick body against neoplasms, e.g. via immunopotentialisation with vaccines [36].

Conclusions

Prevention, prophylaxis and proper treatment is of great significance in those who have suffered from statistically increase incidence of certain neoplasms, for instance special care about the health of pregnant women, through proper monitoring of foetus development, determining the time of delivery with an accuracy to days rather than weeks [2,5,10] and treatment of neuroendocrine disorders during pregnancy using ACTH-depot therapy [13,30], as well as limitation of hormonal contraception and in vitro fertilisation [3] Before that, between 1941 and 1945, a Pole B.Skarżyński and a German H. von Euler-Cheplin published book summarising the biochemistry of neoplasms and they were right to indicate e.g. the significance of genes in carcinogenesis, but genes perceived by them according to more modern notions than those currently expressed in biochemistry, where they are reduced just to a sequence of nucleotides [52]. At a level of thermodynamic deliberations peoples are most effectively protected against self-organisation of neoplasms by living according to autoteleological principles, which means that man acts in accordance with their own and socially acceptable ethical and moral values [7-10,53,54].

There are many reasons required for each system to be brought to dissipathogenic states which would inevitably endanger its existence. It is the dissipation that causes the signs and symptoms of neoplastic diseases ending with destruction of the body if the treatment comes too late and/or is insufficient, limited only to removal of neoplastic lesions without the always necessary elimination and/or prevention of preneoplastic (dissipathogenic) states.

Every disease is only one of the many unhappy events in the life of man, who is always influenced by social determinants. K.S.Khroutski makes a critical analysis of

modern theories starting with the theory of Pitirim Sorokin's triadological principle [7,9]. In the Editorial and Discussion Forum with D. Szkutnik, X.Xu and X.Liu, he described Information of the given living thing as "primary basis" – to provide stable equilibrium of all the united polarities – like the Aristotelian substance (*hypokeimenon*), and which is close to the Eastern conception of Nothingness, from which the universe and all beings have come [9]. The Beginning of Universe is hidden for man due to its informational essence, but we have the formulations of the equation $E =^{i} mc^2$ in different forms and names, e.g. God, Truth, Tao, Jahwe, Buddha, Entelecheia, etc. In eastern tradition Emptiness or Nothingness are ultimate reality. The matter and spirit are not two independent entities, thereby modern science and philosophy remain and act in the information field together with matter and energy, all in one called the Universe (Biocosmos).

References

1. Bałajewicz M, Dembowska J, Klimek R**.** Test of immunopotentialization in colposcopy – a clinical evaluation. *Eur. J. of Obstet and Gynecol and Reprod*. Biology, 1989, 33, 253–257.
2. Cosmi EV, Klimek R, Di Renzo GC, Kulakov V. Kurjak A, Maeda K, Mandruzzato GP, Van Gelin HP, Wladimiroff J. Prognosis of birth term: recommendations on current practice and overview of new developments. *Archives of Perinatal Medicine*. 1997, 3(2), 31–50.
3. Hodorowicz S, Jasiczek D, Klimek R, Tadeusiewicz R. *Rak i niepłodność. Prawda i mity medycyny*. (Cancer and infertility. Truth and myth of medicine). Trio Kraków-Warszawa, 2011.
4. Jasiczek D, Kaim I,Czajkowski K. Historical discovery of natural cause of cancer. *Neuro Endocrinol Lett*. 2012; 33(4):101–111.
5. Jasiczek D, Klimek R, Stencl J, Tadeusiewicz R, Tholt M. *Obstetrical prevention of human cancers. Neuroendocrinology Letters 2012: 33.*
6. Kaim I, Klimek M, Popiela TJ. 60 years of cancer biochemistry. *Gin Prakt*, 2001, 9: 32–34.
7. Khroutski K.S. Rehabilitation of the Russian civilization's cultural-genetic code: Biocosmological possibilities. *Biocosmology – neo-Aristotelism*, 2016; 6(2): 324–369.
8. Khroutski K.S, Klimek R. Biocosmological definition of information and its naturalist causal significance. *Biocosmology – neo-Aristotelism*, 2018; 8(2): 204–262.
9. Khroutski K.S. Editorial and New Noocratic integral rationalism, as the basis for building a "Community of common destiny". *Biocosmology – neo-Aristotelism,* 2018; 8(1): 4–7 and 148–194.
10. Klimek M. *Monitoring of pregnancy and prognosis of birth as spacetime events*. UJ DREAM Kraków 1996.
11. Klimek M, Klimek R, Mazanek-Mościcka M. Preterm birth as an indicator of

cancer risk for the mother. *Int J Gynacol Obstet*, 2002, 3, 73–77.
12. Klimek M, Klimek R, Mazanek-Mościcka M. Biological diagnosis and prognosis in practical obstetrics. *Polish J Gynaec Invest*, 1999, 2 (2), 57–66.
13. Klimek M, Wicherek L, Popiela TJ, et al. Changes of maternal ACTH and oxytocinase plasma concentrations during the first trimester of spontaneous abortion. *Neuro Endocrinol Lett*. 2005; 26: 342-6.
14. Klimek R. *Monitoring of pregnancy and prediction of birth date*. The Parthenon Publishing Group, New York, London, 1994
15. Klimek R. Dysypatywna struktura nowotworów na modelu raka szyjki macicy. (Dissipative structure of neoplasms, studies on the model of uterine cervix cancer). *Gin. Pol*. 1978: 49,765.
16. Klimek R. Hypothalamus hypofunction as an etiological factor in cervical neoplasia. Abstracts of III World Congress I.F.C.P.C. 20, Orlando, 1978.
17. Klimek R. Neuroendocrinologic aspects of the dissipative structures of tumors. *Mat Med Polona*, 1980; 1-2: 91–96.
18. Klimek R.: Etiopathogenesis of tumors and theories of oncogenesis. *Gin. Pol*. 1983; 54: 603–609.
19. Klimek R.: Nucleomagnetic resonance of atoms as an evidence of dissipative structure of malignant tumors. *Przegl. Lek*., 1982; 39: 313–317.
20. Klimek R. *Cancer – cause, determinants and self-defense*. PWN, 1985.
21. Klimek R. Immunotherapy of cervical intraepithelial neoplasia. In: Bompiani A, Carenza L, Salvadori B, Pachi A.(eds). LXIV Congresso Nazionale della Societa Italiana di Ginecologia e Ostetrica, 1986, vol.I, 275–278.
22. Klimek R. Induction and stimulation of immunologic defenses with Gynatren (Solco Trichovas) as an example of cause-related prevention and treatment of neoplasms. *Gin Pol*, 1987, 58, 552–555.
23. Klimek R. NMR imaging in terms of human atomic patology. *Europ J ObstetGyn & Reproductive Biology* 1987; 24 (2): 135–143.
24. Klimek R**.** Cervical cancer as a natural phenomenon. 4th Meeting EAGO, Cracow 1989; *Eur J Obstet Gynecol Reprod. Biol*, 1990, 36, 221238.
25. Klimek R. Nuclear magnetic resonance in obstetrics and gynecology. *Int J Gynecol Obstet* 1990; 32:199–205.
26. Klimek R. Conquering cancer ourselves. New trends in gynecology and obstetrics. *J.Libbey CIC* s.r.l., Roma, 1990, Vol. VI(2); 53–117.
27. Klimek R. Casual prevention of cancer as a natural biological phenomenon. *Medicine Biologie Environment*. 1990, 18, 8–10.
28. Klimek R. Prevention of cervical cancer promotion in gynecological practice (English). Zapobieganie promocji raka szyjki macicy w codziennej praktyce ginekologicznej (Polish). III Symposium of Cervical Pathology and Colposcopy. Cracow 1992, pp.113122 (Polish); pp. 129133 (English).
29. Klimek R. Biology of Cancer: Thermodynamic Answers to Some Questions. *Neuroendocrinology Letters*, 2001, 22, 413–416.
30. Klimek R. Precancerous and cancerous states in the light of the modern knowledge. Stany przed- i nowotworowe w świetle współczesnej wiedzy.

Kolposkopia, 2001, 1(1), 41-42.
31. Klimek R. The etiology of cancer in historical view. *Ginekol Onkol* 2004; 2(4): 214–222.
32. Klimek R. Cancer: health hazard resulting from attempted life protection. Rak jako zagrożenie zdrowia dla ratowania życia. *Curr Gynecol Oncol*, 2010, 8(3) 149–159.
33. Klimek R. Dekalog jako teologiczny program Świętej Trójcy w stworzeniu świata. (Ten Commandments – Holy Trinity teleological program of the universe creation). w. Człowiek i Wszechświat. Jamrozy M, Kuźmicz A, Wszołek B. (eds), 59–68.
34. Klimek R. (ed), Bręborowicz GH, Chazan B, Czajkowski K, Dębski R, Dubcak J, Fedor-Freybergh P, Hajek Z, Kamiński K, Klimek M, Krzysiek J, Lauterbach R, Lukacin S, Malarewicz A, Maly Z, Marianowski L, Oleszczuk J, Pisarski T, Reroń A, Roztocil A, Sajdak S, Skręt A, Stencl J, Szymański W, Wilczyński J, Unzeitig V, Zdebski Z. Declaration of the Childbirth in XXI century. Archives of Perinatal Medicine, 2001, 7(3), 8-14; *Gin Prakt*, 2001, 9, 6-13; *Gin Pol*, 2002, 73, 3–13.
35. Klimek R, Dembowska J, Bałajewicz M, Plechanow J. Effect of immunopotentialization on rate of vaginal smear normalization according to appearance of cervical intraepithelial neoplasia. *Int J Gynecol Obstet*, 1989, 28, 41–44.
36. Klimek R, Jasiczek D, Gralek P, Fedor Freybergh P. Cancer – final cellular form of life. *Int J Prenat Psychol Medicine*, 23, 1-2(2011), 7–17.
37. *Klimek R, Klimek M, Jasiczek D. Immunotherapy of cervical cancer as a biological dissipative structure. Neuroendocrinology Letters, 2011; 32(4):380–388.*
38. Klimek R, Lauterbur PC, Mendonca-Dias MH. A discussion of nuclear magnetic resonance (NMR) relaxation time of tumors in terms of their interpretation as self-organising dissipative structures and of their study by NMR in vivo by NMR zeugmatographic imaging. *Gin. Pol*. 1981, 52, 493-502; *Materia Medica Polona*, 1983, 15/119, 47–53.
39. Klimek R, Lauterbur PC, Mendonca-Dias MH. Nucleomagnetic resonance in gynecological diagnosis and therapy. Mat Nauk XXI Zjazdu PTG Poznań, 1981, t.II:27-28.
40. Klimek R, Lauterbur PC, Mann WJ, Mendonca-Dias MH, Kaplan C. Nuclear resonance technique in human surgery. *Przegl Lek*, 1982; 39:335–338.
41. Klimek R, Lauterbur PC, Mendonca-Dias MH. Et al. Nuclear magnetic resonance relaxation time as a proof of the plasmid in Escherichia Coli. Przegl. Lek., 1982, 39, 533-534.
42. Klimek R, Loster A, Dembowska J, Bałajewicz M. CIN as an indication for immunotherapy with Gynantren. II Symposium of Study Group for Cervical Pathology and Colposcopy. 1986, 158-162, Cracow-Rabka.
43. Klimek R, Madej J. Octapressin in colposcopy. In Klimek R, Król W. (ed): Oxytocin and its analogues. Cracow 1964, Symposium of PTE, pp.115–118. *Gin Pol*,1964: 2, 35, 290.

44. Klimek R, Madej J. Simultaneous epithelial and vascular changes in carcinogenesis. *Gin Pol*, 1985, 56, 53–56.
45. Klimek R, Skarżyński B, Szczepkowski TW. Biochemia samożywnych bakterii siarkowych .Cz.III. Cytochrom w Thiobacillus thioparus. (Biochemistry of autotrophic sulphuric bacteria). *Acta Biochem.Pol*., 1956, 3,261–266.
46. Klimek R, Walas-Skolicka E. Le syndrome hypothalamique post-gravidique comme agent de risque de developpement de cancer du col uterin. *Arch Anat Cytol Path*, 1977, 25, 5, 305–309.
47. Mann WJ, Mendonca-Dias MH, Lauterbur PC, Klimek R. Preliminary in vitro studies of nuclear magnetic resonance relaxation time and three-dimensional nuclear magnetic resonance imaging in gynecological oncology. *Am J Obst Gynec*, 1984; 148:91–96.
48. Milovanowic R, Grcic R, Stojkovic L. Effect of vaccination with SolcoTrichovac on the vaginal flora of female patients with Trichomoniasis. *Biol Res Pregnancy*, 1980, 1–4, 181–186.
49. Prigogine I. *From being to becoming: time and complexity in the physical science*. San Francisco 1980; W.H.Freeman
50. Skarżyski B, Klimek R, Szczepkowski T. Cytochrom in thiobacillus thioparus. *Bull Pol Acad Science*, 1956, 4:299–302.
51. Smoluchowski M.: Zur kinetischen Theorie der Brownschen Molekularbewegung und der Suspensionen. *Ann. Phys*. 1906, 21, 756–780.
52. von Euler-Cheplin H, Skarżyski B. *Biochemie der Tumoren*. F.Enke Verlag 1942 Stuttgart.
53. White L, Laske K,Welters MYP et al. *J Cancer informatics* 2014,doi:10.4137/CIN.S 16346.
54. Wicherek L, Popiela TJ, Gałązka K. et al**.** Metallothionein and RCAS1 expression in comparison to immunological cells activity in endometriosis, endometrial adenocarcinoma and endometrium according to menstrual cycle changes. *Gynecologic Oncology. 99(3):622-30, 2005.*

ИСТОРИОСОФИЯ П.А. СОРОКИНА КАК ЧАСТЬ ЕГО ИНТЕГРАЛЬНОЙ ПАРАДИГМЫ НАУЧНОГО ИЗУЧЕНИЯ СТРУКТУРЫ И ЭВОЛЮЦИИ ОБЩЕСТВА, КУЛЬТУРЫ И ЛИЧНОСТИ

Владимир Николаевич АЛАЛЫКИН-ИЗВЕКОВ[1]

HISTORIOSOPHY OF P.A. SOROKIN AS PART OF HIS INTEGRAL PARADIGM FOR SCIENTIFIC STUDY OF STRUCTURE AND EVOLUTION OF SOCIETY, CULTURE, AND PERSONALITY

Vladimir N. ALALYKIN-IZVEKOV

«*…его общее видение совпадает с Аристотелевским…*»
- Карл Циммерман

«*… почти все великие социологические системы являются частью философии истории и … большинство великих философий истории представляют собой что-то вроде социологии культурных перемен…*»
- Питирим А. Сорокин

Резюме. В работе представлено оригинальное переосмысление генезиса, эволюции, сущности, роли, места и значения философско-исторических воззрений великого российского и американского философа, социолога и просветителя П.А. Сорокина. По ряду причин научно-философское наследие П.А. Сорокина, как на Западе, так и в России, порой рассматривается и анализируется не в его целостности, многоаспектности, системности и эволюции, а подобно слону в древнеиндийской притче – хобот огромного животного принимается за шланг, ноги уподобляются колоннам, хвост – веревке и т.д.

В данной работе историософия П.А. Сорокина представлена в процессе ее развития, в контексте других его социокультурных теорий, а также как важнейшая часть фундаментальной философско-мировоззренческой парадигмы, которую ученый называет *интегрализмом*. Как *интегрализм* в целом, так и *интегральная историософия* П.А. Сорокина, в частности, базируются на социологических, культурологических, психоневрологических и психофизиологических концепциях и теориях, которые, по мере их становления и развития, ученый излагает в многочисленных трудах на протяжении своей полувековой научной карьеры, и которые мы условно именуем его *системой социологии*.

С точки зрения становления зрелой историософии ученого, особый интерес представляет собой этап восстановления мыслителем его научно-

[1] The International Society for the Comparative Study of Civilizations, Washington, DC, USA.

мировоззренческой “картины мира” в рамках интегральной парадигмы. В этом процессе черты интегрализма пробретают все многочисленные концепции и теории ученого. Интегральной становится его социология, философия, психология и, в первую очередь, его историософия, которая не только оказывается областью первоочередных научных интересов мыслителя, но и постепенно как бы вбирает в себя, синтезирует в единое целое многие его обществоведческие концепции и теории.

На основе тщательного анализа трудов ученого мы полагаем, что историософия П.А. Сорокина занимает в его зрелой интегральной научно-философской парадигме гораздо более значительное место и играет гораздо более важную роль, чем полагали некоторые исследователи его наследия. Как совершенно ясно показывают, например, высказывания самого ученого, она неразрывно соединена с его *системой социологии,* и обе научные области, являясь частями интегральной парадигмы, фактически представляют собой одно неразделимое целое.

Таким образом, помимо переосмысления основных положений историософии П.А. Сорокина в контексте его интегральной парадигмы, предпринимается попытка адекватно определить ее место и роль как в его научном творчестве, так и в мировой сокровищнице высших достижений человеческого духа.

***Ключевые слова*:** система социологии, интегрализм, интегральная историософия, интегральная парадигма научного изучения структуры и динамики развития общества, культуры и личности, циклическая теория истории, линейная теория истории, флуктуационная теория истории, социокультурная суперсистема, рекурсивность, макроуровневые социокультурные образования и долговременные социокультурные процессы.

Содержание

1. Система социологии

2. Интегрализм

3. Историософия

Заключения

"…his general outlook is Aristotelian…"
- Carle Zimmerman

"… almost all great sociological systems are a brand of philosophy of history, and … most of the great philosophies of history are a sort of sociology of cultural change …
- Pitirim A. Sorokin

Abstract. The paper presents an original rethinking of genesis, evolution, essence, role, place, and significance of philosophical and historical views of the great Russian and American philosopher, sociologist and educator P.A. Sorokin. For a number of reasons, both in the West and in Russia, scholarly and philosophical heritage of P.A. Sorokin is sometimes viewed and analyzed not in its integrity, multidimensionality, systemic complexity, and evolution, but, like an elephant in the ancient Indian parable – trunk of the colossal animal is mistaken for a hose, legs are likened to columns, tail is a rope, etc.

In this work, historiosophy of P.A. Sorokin is presented in the process of its development, in the context of his other sociocultural theories, and also as the most important part of a fundamental philosophical and ideological paradigm, which the scholar calls *integralism.* Both *integralism* as a whole and *integral historiosophy* of P.A. Sorokin, in particular, are based on sociological, cultural, psycho-neurological and psycho-physiological concepts and theories, which, as they originate and develop, the scientist outlines in numerous works throughout his half-a-century long scholarly career, and which we conditionally call his *system of sociology.*

From the point of view of development of the scholar's mature historiosophy, the stage of reintegration by the thinker of his scientific and ideological "picture of the world" within the framework of the integral paradigm is of particular interest. In this process, the features of *integralism* are acquired by all scholar's numerous concepts and theories, including his sociology, philosophy, psychology and, first of all, by his historiosophy – which not only turns out to be the thinker's area of primary scholarly interests, but which also gradually absorbs, as it were, many of his other social concepts and theories.

Based on a thorough analysis of the scholar's works, we believe that historiosophy of P.A. Sorokin occupies a much more significant place in his mature integral scholarly and philosophical paradigm, and it plays a much more important role than some researchers of his legacy believed. As the statements of the scholar himself quite clearly demonstrate, it is, for example, inseparably connected with his *system of sociology,* and both scientific fields, being parts of the *integral paradigm*, are in fact one inseparable whole.

Thus, in addition to rethinking the basic tenets of the historical philosophy of P.A. Sorokin in the context of his integral paradigm, an attempt is being made to adequately determine its place and role both in his scholarly work, as well as in the world treasury of highest achievements of the human spirit.

***Keywords*:** System of sociology, integralism, integral historiosophy, integral paradigm of scientific study of structure and dynamics of development of society, culture, and personality, cyclical theory of history, linear theory of history,

fluctuational theory of history, sociocultural supersystem, recursiveness, macro-level sociocultural entities and long-term sociocultural processes

Contents

1. System of Sociology

2. Integralism

3. Historiosophy

Conclusions

ОСНОВНОЙ ТЕКСТ СТАТЬИ

1. Система социологии

Первоначально, *система социологии* П.А. Сорокина представляла собой монументальный проект разработки им основ науки о структуре и развитии общества, который мыслитель намеревался изложить в многотомном труде, который так и назывался – “Система социологии.” В известном смысле этот труд представляет собой фундамент всех последующих научных социокультурных и философских построений учёного. П.А. Сорокин планирует опубликовать десять томов «Системы социологии», однако по многим причинам (революция, гражданская война, эмиграция, а также ряд коренных пересмотров своего научного мировоззрения), этот замысел остается не осуществлённым и в 1920 г. в печати появляются лишь два тома задуманной монографии [1].

Первый том “Системы” посвящен, в основном, анализу индивидуальных социальных взаимодействий, а во втором исследуются структура и взаимодействие социальных групп различного калибра и уровня. Как известно, в ранние годы своей научной карьеры П.А. Сорокин исповедует позитивистско-бихевиористический подход как к социальной структуре, так и к социокультурному динамизму истории. Используя раннюю терминологию П.А. Сорокина, первые два тома “Системы” посвящены “социальной аналитике,” а основные идеи своей “социальной механики,” т.е. деятельности людей под воздействием различных факторов окружающей среды, а также их собственных психоневрологических и психофизиологических импульсов, предназначались для публикации в так и не появившемся в печати третьем томе «Системы». Тем не менее, ученый успевает изложить их во второй части изданного в том же, 1920 г. «Общедоступного учебника по социологии» [2].

Бурные события начала XX века вносят радикальные корррективы в планы молодого, однако уже широко известного ученого. Так, в 1921-1922 гг. Россию охватывает достигший невиданных масштабов голод, который уносит несколько миллионов жизней. Это колоссальное бедствие побуждает Сорокина

развернуть анализируюший феномен голода раздел второй части «Общедоступного учебника по социологии» в целый том.

Ученый свидетельствует: «Опубликовав мои два тома *Системы социологии,* я отложил написание третьего тома, чтобы воочию изучить характерные для революции феномены и представить их в такой форме, которая облегчила бы их исследование в обычное время. С моими студентами и сотрудниками, а также в тесном сотрудничестве с академиками Павловым и Бехтеревым, я приступил к исследованию социальных изменений, социальных групп и их развития в нашем обществе. В рамки исследования входило изучение бюджетов времени наших современников, а также сравнительного влияния различных факторов в определении человеческого поведения. Поведение людей вокруг меня лишилось сдерживающих факторов, которые в нормальных обстоятельствах маскируют его механизм и усложняют его исследование. В качестве основного объекта моего исследования я определил влияние голода на человеческое поведение, социальную жизнь и социальную организацию. При изучении данной проблемы я располагал личным опытом, а также преимуществами личных контактов в знакомой мне среде. Фундаментальная потребность в питании, а также влияние пищи на человеческое поведение никогда прежде не подвергались серьезному исследованию» [3, сс. 283–284]. Затем, в свою очередь, последняя глава «Голода как фактора» тоже превращается в отдельный большой том – «Социологию революции», которая создаётся в 1923 г., когда Сорокин уже находится в Чехословакии.

Разрушительные катаклизмы первой мировой войны, российской революции и гражданской войны также радикальным образом изменяют его мировоззрение. Результаты многолетних усилий учёного реинтегрировать его взгляды на социокультурное развитие в рамках новой, интегральной парадигмы ныне известны как четырёхтомный *opus magnum* «Социальная и культурная динамика» [4], хотя корни ее можно проследить уже в “Системе социологии” и даже в таких специализированных трудах, как, например, «Основы социологии города и села» (1929 г.) и «Систематизированная хрестоматия по сельской социологии (1930–1932 гг.)».[2]

Эти масштабные работы основаны на колоссальном количестве исторического материала и содержат детальный анализ как структуры, так и динамики развития аграрного общества, а также аграрно-урбанистических отношений. Являясь, по сути, компаративной аграрно-урбанистической философией истории человечества, они представляют собой своеобразный

[2] Sorokin, P.A., Zimmerman, C.C. (1929). Principles of Rural-Urban Sociology. New York: Henry Holt and Company. 652 p. (Прим. авт.)

Sorokin, P.A., Zimmerman, C.C. Galpin, C.J. Ed-s. (1965). A Systematic Source Book in Rural Sociology. Vol. I. New York: Russell & Russell. 645 p. (Прим. авт.)

Sorokin, P.A., Zimmerman, C.C. Galpin, C.J. Ed-s. (1965). A Systematic Source Book in Rural Sociology. Vol. II. New York: Russell & Russell. 677 p.

Sorokin, P.A., Zimmerman, C.C. Galpin, C.J. Ed-s. (1932). A Systematic Source Book in Rural Sociology. Vol. III. Minneapolis New York: The University of Minnesota Press. 752 p.

полигон, где отрабатываются концепции и теории таких будущих классических трудов, как “Социальная и культурная динамика” и “Общество, культура и личность.”

> Так, уже в предисловии к первому тому «Хрестоматии по социологии села» (A Systematic Source Book in Rural Sociology) П.А. Сорокин констатирует: “На протяжении всей своей истории человеческое общество – в своих истоках, формах, деятельности, процессах, росте, эволюции – находилось, в основном, в такой степени под давлением аграрных и сельскохозяйственных сил, что до настоящего времени социология как общественная наука фактически была социологией сельской жизни [5, с. VII].

В работах также уже присутствуют такие ключевые понятия проходящей этап своего становления интегральной парадигмы, как, например, социальная стратификация, социальная мобильность, а также авторитарный, контрактный и семейственный типы социальных отношений.

Уникальные по шокирующей правдивости, научной глубине содержания и прозрачности изложения автобиографические произведения мыслителя позволяют нам стать свидетелями событий бурного начала двадцатого века, а также заглянуть в его творческую лабораторию.[3] П.П. Кротов отмечает в этой связи:

> В многочисленных работах, анализирующих научное творчество Питирима Сорокина, его автобиография, как правило, остается вне интерпретаций смены его философской парадигмы. «Долгий путь»[4], вышедший в свет в 1963 году в США воспринимается многими исследователями, в том числе и биографами, только как классическое мемуарное произведение. Тем не менее, автобиографию Питирима Сорокина вряд ли можно отнести к историческим мемуарам, хотя перечень исторических фактов в тексте огромен. Кроме того, автор был непосредственным участником переломных в отечественной истории событий. Было бы также недостаточным определить «Долгий путь» как научные мемуары, несмотря на то, что здесь Сорокин дает детальную характеристику практически всем своим работам. В автобиографии нашли отражение научные дискуссии во многом определившие развитие современной отечественной и американской социологии. С моей точки зрения, интерпретация «Долгого пути» как научного исследования, в котором Сорокин анализирует трансформацию своего мировоззрения и свою личную историю, основываясь на

[3] См. например, Pitirin A. Sorokin. Leaves From a Russian Diary – and Thirty Years Later. Boston: The Beacon Press. 1950. 346 p.; Pitirim A. Sorokin. A Long Journey: The Autobiography of Pitirim A. Sorokin.New Haven, Conn.: College and University Press. 327 p.

[4] Название первоначально опубликованной на английском языке автобиографии П.А. Сорокина «The Long Journey» обычно переводится в российских источниках как «Долгая дорога» либо «Долгий путь».

> постулатах поздней концепции «созидательного альтруизма», открывает новые возможности более глубокого понимания книги и Сорокина – ученого.[5]

С публикацией таких фундаментальных трудов, как «Общество, культура, личность», «Социальные философии периода кризиса» (позже переименованной в «Современные исторические и социальные философии», «Кризис нашего времени», коллективной монографии «Обзор творчества П.А. Сорокина», обобщающей работы «Главные тенденции нашего времени», «Социокультурная причинность, пространство, время» и, в особенности, последнего крупного труда мыслителя «Социологические теории современности», П.А. Сорокин активно продолжает свой поиск «истины в последней инстанции» о социокультурной вселенной.

В определенном смысле учёный продолжает работу над своей *системой социологии* всю последующую жизнь. Включив в себя многочисленные аспекты научного анализа структуры и развития социума, она становится основанием, краеугольным камнем грандиозного здания *интегральной парадигмы научного изучения структуры и динамики развития общества, культуры и личности.*

Поскольку зрелая историософия П.А. Сорокина является частью его интегральной философско-научной парадигмы, обратимся к ее генезису и эволюции.

2. Интегрализм

В наших предыдущих работах [6] мы рассматриваем как генезис, так и эволюцию научной и мировоззренческой парадигмы ученого, а также предлагаем следующую хронологию ее периодов:

1) Христианско-идеациональный (1889–1905 гг.).
2) Позитивистско-бихевиористский (1905–1920 гг.).
3) Переход от позитивизма к интегрализму (1920–1937 гг.).
4) Интегралистский (1937–1940-е гг.).
5) Провидческий (первая половина 1940-х гг.).
6) Альтруистический (вторая половина 40-х–50-е гг.).
7) Обобщающий (60-е гг.).

С точки зрения становления зрелой историософии ученого, особый интерес представляет собой этап восстановления мыслителем его научно-мировоззренческой “картины мира” в рамках интегральной парадигмы, который по времени совпадает с периодом работы над фундаментальным трудом “Социальная и культурная динамика.” В этом процессе черты интегрализма пробретают все многочисленные концепции и теории ученого. Интегральной становится его социология, философия, психология и, в первую очередь, его историософия, которая не только оказывается областью первоочередных научных интересов мыслителя, но и постепенно как бы

[5] Кротов П.П. Автобиография, как отражение альтруистической трансформации Питирима Сорокина. *http://www.komi.com/IRSI/soroktxt.html*

вбирает в себя, синтезирует в единое целое многие его обществоведческие концепции и теории.

По мнению Н.Ф. Зюзева, корень интегрализма Сорокина – в его интегральной теории истины и познания. Интегральная эпистемология П.А. Сорокина объединяет в себе все формы познания – эмпирическую, рациональную и интуитивную, и в этом ее решающее преимущество перед любой односторонней теорией познания. [7, сс. 150–152].

Сам П.А. Сорокин постулирует свои взгляды следующим образом: "… *Интегральная истина не идентична ни одной из трех форм истины, но охватывает их все.* Интегральная истина с ее трехмерным измерением истины веры, разума и чувств, ближе к абсолютной истине, чем любая из трех ее односторонних форм. Таким же образом и реальность, открываемая интегральной трехмерной истиной, с ее источниками – интуицией, разумом и чувствами – гораздо ближе к бесконечной металогической реальности с ее coincidentia oppositorum[6], чем чисто чувственная, или чисто рациональная, или же чисто интуитивная реальность, открывающаяся по отдельности каждой из этих систем истины. *Чувственно-эмпирический аспект интегральной истины познается с помощью истины чувств; рациональный – с помощью истины разума; сверхрациональный – с помощью истины веры.* Тройственная интегральная система истины обеспечивает нас не только более адекватным знанием реальности, но и более надежным опытом – даже в специфической области каждой системы истины" [4, с. 870].

Традиционно, "библией" интегрализма Сорокина считается его четырехтомная монография, переведенная на русский язык как "Социальная и культурная динамика." Присмотримся, однако, к полному названию труда, которое в его оригинальном, англоязычном варианте выглядит следующим образом: "Социальная и культурная динамика: Исследование изменений в основных системах искусства, истины, этики, юриспруденции и социальных отношений." Явно, что ключевые слова здесь – динамика и изменение. Так, первые два тома "Динамики" посвящены изменению перечисленных выше культурных систем, в третьем томе анализируются изменения в социальных системах, в четвертом же представляется аналитический аппарат ученого.

Ученый свидетельствует: "Взятые вместе, первый, второй и третий тома представляют собой предварительное исследование культурной и социальной динамики. В четвертом томе я представлю в более завершенной и более аналитической форме систематическую теорию социальных и культурных изменений, а также формулировку ведущих принципов социологической методологии» [8, с. VI-VII].

Итак, в "Динамике" ученый представляет социокультурную динамику развития общества с точки зрения своей интегральной парадигмы. Где же нам искать структуру социума ученого в ее зрелом, интегральном представлении? Как мы помним, ученый очертил структуру общества в своей изданной еще в

[6] Coincidentia oppositorum – (лат.) единство противоположностей. (Прим. авт.)

1920 г. “Системе социологии”. Однако, “Система социологии” была написана с позитивистски-бихевиористских позиций.

По всей видимости, наиболее всесторонне *интегральная парадигма* ученого отражена в не переведенной пока еще на русский язык монументальной монографии ученого “Общество, культура, личность. Их структура и динамика. Система общей социологии” [9], в которой ученый развертывает перед читателем сопровождаемую фундаментальным по глубине междисциплинарным научным анализом всеобъемлющую панораму социокультурной вселенной. Так, уже из названия книги совершенно очевиден тот факт, что зрелая, интегральная социокультурная парадигма, (а, следовательно, и историософия) П.А. Сорокина строится на интегральной, триединой основе нерасчленимого (кроме как в целях научного анализа) единства общества, культуры и личности. Далее ученый глубоко анализирует структуру и динамику развития общества в полнейшей и органической связи трех основных компонентов социокультурного универсума, а также представляет вниманию читателя выведенные на основе этого анализа наиболее общие, универсальные тенденции, закономерности и законы общественного развития.

Ученый всегда подчеркивает в своих трудах, что единство общества, его представителей и его культуры неразрывно и, с необходимыми допущениями, возможно лишь для целей научного анализа. Он, например, пишет в третьем томе “Динамики”: “В то время как первый и второй тома связаны, главным образом, с флуктуациями в области культурных процессов, этот том концентрируется на тех, что находятся в области социальных явлений. Культурный и социальный представляют собой два аспекта единой, неразделимой реальности; однако для целей анализа они могут быть условно разведены и изучены отдельно [8, с. V].

Все многочисленные работы ученого зрелого периода как бы подтверждают, дополняют и иллюстрируют его интегральную парадигму познания и анализа социума, его культуры и основных его создателей и строителей – индивидуальных личностей. Перед читателем – своего рода обобщающий труд, включающий в себя все компоненты его интегральной научно-мировоззренческой парадигмы, который буквально ломится от описаний и анализа сотен тысяч малых и великих социокультурных явлений и процессов, причем буквально каждое из них тут же выводится на уровень универсальных философско-исторических выводов и заключений.

Крупный западный исследователь научного наследия ученого Б. Джонстон также приходит к выводу, что именно монография “Общество, культура, личность” представляет собой синтезирующий и отражающий интегральную парадигму социокультурной вселенной во всей ее полноте, многосторонности и системности, обобщающий труд. Он, в частности, констатирует:

> Сорокин делает свой следующий теоретический шаг в работе “Общество, культура и личность: система общей социологии”. Большая часть тома представляет собой интеграцию ранних работ.

> Анализ феноменов общества и культуры, в основном, опирается на Динамику, в то время как результирующие обобщения указывают на проблемы, описанные в Кризисе нашего времени. “Новизна” проявляется в посвященных личности секциях, в которых Сорокин приводит все в систему и сосредоточивает внимание на социальной организации, а также на эволюции личности [10, с. 170].

В рамках своей интегральной парадигмы научного изучения структуры и динамики развития общества, культуры и личности, в своих трудах философ не только всесторонне анализирует прошлое, современное ему настоящее и даже будущее социокультурного универсума, но и предлагает глубоко оригинальные и по-настоящему эффективные решения встающих перед стремительно глобализирующимся человечеством экзистенциальных проблем. Именно поэтому его интегральная парадигма представляет собой подлинно научную основу стремительно развивающейся в настоящее время многочисленных новых областей исследований макроуровневых социокультурных образований и долговременных социокультурных процессов.

Сюда, в частности, относятся новая фундаментальная научная область *Биокосмология – Нео-Аристотелизм* (предмет исследования для Биокосмологической ассоциации), разрабатываемые нами новые фундаментальные научные области *цивилизационика и философия цивилизации* (В.Н. Алалыкин-Извеков), многодисциплинарное научное направление *глобалистика* (А.В. Коротаев и др), школа российского циклизма (Ю.В. Яковец и др.), область *сравнительного изучения цивилизаций* (У. Макнилл, К. Куигли и др.), *ноосферные исследования* (В.И. Вернадский, Т. Шарден), стремительно развивающаяся в России *культурология* (Ю.М. Лотман и др.), *Большая история* (Д. Кристиан Д. D.), *мировая история* (Д. Даймонд, Ф. Фернандес-Арместо и др.), *мир-системная теория* (И. Валлерстайн и др.), а также многие другие области и направления.

3. Историософия

В предисловии к четырехтомному изданию «Социальной и культурной динамики» ученый делится с нами мыслями по поводу своей масштабной историософской концепции: «Из всех полу-исторических дисциплин, которые она напоминает, она ближе всего к тому, что часто называют философией истории. Поскольку почти все великие социологические системы являются частью философии истории и поскольку большинство великих философий истории представляют собой что-то вроде социологии культурных перемен, у меня не было никаких возражений по поводу использования данного названия теми, кто заинтересован в определении данной работы»[7].

На первый взгляд, эта фраза несколько загадочна в свой рекурсивности, однако, по некотором размышлении, мы можем попытаться как найти ключ к ее

[7] Sorokin P.A. Social and Cultural Dynamics. Volume I. 1937. p. IX.

расшифровке, так и достаточно точно определить место историософии ученого в его интегральной парадигме.

Так, в отличие от “индивидуализирующих” (т.е. описательных, как, например, история), общественных наук, ученый рассматривает социологию как науку “генерализирующую,” т.е. исследующую наиболее общие закономерности рассматриваемых явлений [11, с. 161; 12, с. 3]. Следовательно, под “социологией культурных перемен” ученый имеет в виду наиболее общие закономерности культурного развития общества, или, по П.А. Сорокину, постоянную и неизбежную смену *культурных систем и суперсистем*. Далее, это утверждение также свидетельствует о том, что, с точки зрения ученого, практически все великие философии истории включают в себя социологическую систему, то есть, ту или иную парадигму общественной структуры и развития общества.

Собственно говоря, сам ученый охотно предоставляет нам ключ как к истинному пониманию своей интегральной историософии, так и к ее месту и роли в *интегральной* научно-философской парадигме. В относящейся к 1954 г. частной переписке, П.А. Сорокин, например, замечает: Касательно перечисления моих конкретных вкладов в социологию, вкратце они таковы:

Систематическая теория социальной мобильности, подкрепленная огромным числом эмпирических данных. Моя монография о социальной мобильности до сих пор является единственной существующей монографией в данной области.

Логически и эмпирически последовательная система социологии как науки. В плане своей логической и эмпирической системности она превосходит любую другую социологическую систему последних двух или трех десятилетий.

Логическая и эмпирическая система социальной и культурной динамики, либо философии истории. Эта система уже вошла в анналы истории наряду с системами Шпенглера, Тойнби и немногих других, как, возможно, наиболее существенный вклад в данной области.

Теория социального класса, в особенности класса крестьян, а также социологии крестьянства. Открытие, формулировка и обоснование закона поляризации. Открытие, формулировка и обоснование закона флуктуации, а также государственной регламентации и контроля.

Исчерпывающее исследование витальных, моральных, ментальных, религиозных, артистических и других аспектов бедствий и катастроф.

Систематическая теория революций и войн, включая первое эмпирическое исследование всех войн и революций, начиная с VI века до н.э. по настоящее время. Мое исследование революций, а также их динамики и причин до сих пор остается единственным исследованием всех внутренних волнений с VI века до н.э. по настоящее время.

Обоснованная критика заблуждений в существующих социологических, психологических и других теориях.

Первая попытка научного изучения феномена креативной любви.

Далее, в нескольких моих работах сформулированы, и, возможно, открыты, определенные закономерности социальной и культурной жизни, однако в кратком письме данные закономерности перечислить невозможно.”[8]

На первый взгляд, включая историософию в рамки своих сугубо социологических исследований, шестидесятипятилетний ученый “выводит за скобки” таковой, по сути, ее важнейшие положения. Мы, однако, полагаем, что на самом деле мыслитель тем самым включает как *систему социологии*, так и историософию в общий контекст своей интегральной парадигмы. При таком междисциплинарном понимании, историософия ученого перерастает, казалось бы, отведенные ей ученым “социологические” рамки и становится одной из важнейших составляющих его интегральной – *Динамической, Флуктуационно-Циклической и Триадологической* – научно-мировоззренческой парадигмы.

Согласно П.А. Сорокину, история любой организованной группы (а общества представляют собой разновидность таковых) конечна, т.е. в конечно итоге, циклична. Любое общество обычно проходит через этапы своего возникновения, становления, расцвета, кризиса, увядания, и, в конечном итоге, исчезновения. На этой концептуальной основе возлежат, например, “цивилизационные” теории Н.Я. Данилевского, О. Шпенглера и А. Тойнби.

Культуры же, по П.А. Сорокину, как бы “включаются” одна в другую, зачастую наследуя наиболее стойкие и жизнеспособные элементы своих далеких предшественниц. Поэтому, надолго переживая общества, в которых они зародились, великие культурные системы могут существовать на протяжении весьма длительного времени. Философия истории П.А. Сорокина, таким образом избегает характерного для некоторых “философов истории” одностороннего, “монистического” подхода, а следовательно, является строго научной.

А. Тойнби полагает, что суть философии истории П.А. Сорокина возможно сгруппировать под следующими пятью заголовками:

1) идея культурной интеграции;
2) теория социальных и культурных изменений;
3) идентификация трех культурных суперсистем либо образов жизни через которые или вокруг которых интегрированы культуры;
4) идея чередования этих трех образов жизни с течением времени, а также анализ этого процесса; и
5) сорокинская концепция взаимоотношений между типами культуры и типами личности. [13, сс. 31-32].

Очевидно, однако, что данные положения характеризуют далеко не все аспекты историософии П.А. Сорокина, которая, как известно, включает в себя колоссальное количество категорий, концепций и теорий структуры и эволюции социокультурной вселенной. Нетрудно видеть, например, что все оригинальные и фундаментально обоснованные теории социальных

[8] From the letter to: Mother Olowienka, Feb 10, 1954. Электронный источник: http://cliffstreet.org/index.php/theories

конфликтов и кризисов, в которую входят теории революции, войны, голода, эпидемий, бедствий и многих других кризисных социокультурных явлений представляют собой органичную часть философии истории ученого. Историософия П.А. Сорокина несомненно включает в себя также выдвинутые и всесторонне разработанные ученым принцип лимита развития, принцип имманентного изменения социокультурной системы, принцип поляризации, усиления и ослабления социального контроля, конвергенции. Сюда же относятся принцип флуктуации между саморегуляцией и модификацией окружающей среды [9, сс. 447-448), принцип флуктуации размера и стратификационного профиля групп [9, с. 450] и многие другие фундаментальные положения и закономерности.

Потенциально, да и фактически, она включает в себя все его социокультурные и психосоциальные теории, ибо они представляют собой фундамент, на основе которого ученый делает свои прозорливые выводы, заключения и диагнозы. Сюда же относится гениальное заключение ученого о том, что проходящее через период кризиса общество, скорее всего, страдает от синдрома кризиса своих фундаментальных ценностей. Другой пример – научные исследования ученым феномена креативной любви. Собственно, сами исследования были и предприняты-то ученым с целью нахождения и разработки средства решения либо облегчения извечных проблем человечества – войн, революций, эпидемий, голода и т.д.

Таким образом, поставленная нами проблема разрешения научно-методологической проблемы определения границ историософии П.А. Сорокина внутри его философско-научной парадигмы разрешается как естественно, так и логично. С целью ее иллюстрации мы бы предложили “архитектурную” аналогию и сравнили бы интегральную парадигму ученого с колоссальным зданием средневекового собора. Как мы уже упоминали, учёный продолжает работу над своей *системой социологии* всю последующую жизнь. Включив в себя многочисленные аспекты научного анализа социума, она становится основанием, своеобразным краеугольным камнем всей интегральной научно-мировоззренческой парадигмы мыслителя. Опираясь на прочное основание социологических, культурологических, психоневрологических и психофизиологических концепций и теорий ученого (т.е. *системы социологии*), его историософия представляет собой как бы своды, стены, фрески, скульптуры и витражные окна. Что же касается теории истины и познания П.А. Сорокина, то в таком представлении является ключевым, замковым камнем главной, несущей арки огромного здания его *интегральной парадигмы научного изучения структуры и динамики развития общества, культуры и личности.*

Заключения

На протяжении своей уникальной полувековой научной карьеры П.А. Сорокин разрабатывает состоящую из многочисленных социологических, культурологических, психоневрологических и психофизиологических концепций и теорий великую социологическую систему, которую мы условно

именуем его *системой социологии.* Как *интегрализм* в целом, так и *интегральная историософия* П.А. Сорокина, в частности, базируются на прочной научной основе *системы социологии.*

Разработанная ученым *фундаментальная интегральная парадигма научного изучения структуры и динамики развития общества, культуры и личности* представляет собой прочную основу стремительно развивающейся в настоящее время новой области глобальных исследований *макроуровневых социокультурных образований и долговременных социокультурных процессов.* Колоссальный массив принципов, концепций и теорий, составляющий *систему социологии,* неразрывно связан с *интегральной историософией* ученого, а потому обе являются неотъемлемыми частями его *интегральной парадигмы научного изучения структуры и динамики развития общества, культуры и личности.*

Внешний отзыв

"I am excited to see the Sorokin work get more traction. It is an important project in so many ways!" (Blair A. Ruble[9], a Distinguished Fellow at the Woodrow Wilson International Center for Scholars in Washington D.C., USA).

Литература

1. Сорокин П.А. Система социологии / Питирим Александрович Сорокин: вступ. статья, сост. и комментарии В.В. Сапова. – М.: Астрель, 2008. – 1008 с.
2. Сорокин П.А. Общедоступный учебник социологии. Статьи разных лет / Ин-т социологии. – М.: Наука, 1994. – 560 с. – (Социологическое наследие). – ISBN 5-02-013464-3 (в пер.).
3. Sorokin. P. (1950). Leaves from a Russian Diary – and Thirty years later. Boston: The Beacon Press. 346 p.
4. Сорокин, П.А. Социальная и культурная динамика / Питирим Александрович Сорокин; пер. с англ., вст. Статья и комментарии В.В. Сапова. – М.: Астрель, 2006. – 1176 с.: ил., 24 с ил. – (Социальная мысль России).
5. Sorokin, P.A., Zimmerman, C.C. Galpin, C.J. Ed-s. (1965). A Systematic Source Book in Rural Sociology. Vol. I. New York: Russell & Russell. 645 p. P. VII.
6. Алалыкин-Извеков В.Н. Философско-исторические воззрения П.А.Сорокина: генезис и эволюция: монография. – Томск: Томский ЦНТИ, 2017. – 166 с.

[9] Previously Dr. Ruble served as Vice President for Programs, (2014–2017), as well as Director of the Center's Comparative Urban Studies Program /Urban Sustainability Laboratory (1992–2017), Director of the Kennan Institute for Advanced Russian Studies (1989–2012) and Program on Global Sustainability and Resilience (2012–2014).

7. Зюзев Н.Ф. Философия Питирима Сорокина: диссертация доктора философских наук: 09.00.03. – М., 2004. – 384 с.
8. Sorokin P. Social and Cultural Dynamics: Fluctuation of social relationships, war, and revolution. American Book Company. Vol. III. New York: 1937. 636 p.
9. Sorokin, Pitirim A. (1947) Society, Culture, Personality. Their Structure and Dynamics: A System of General Sociology. New York & London: Harper & Brothers Publishers. 742 p.
10. Johnston, Barry V. (1995). Pitirim A. Sorokin: An Intellectual Biography. Lawrence, Kansas: University Press of Kansas. 380 p.
11. Сорокин П.А. Человек. Цивилизация. Общество / Общ. ред., сост. и предисл. А.Ю. Согомонов: Пер. с англ. – М.: Политиздат, 1992. – 543 с.
12. Sorokin, P., Zimmerman, C.C. Principles of Rural-Urban Sociology. New York: Henry Holt and Company. 1929. 652 p.
13. Zimmerman C. (1968). Sorokin, the world's greatest sociologist: His life and ideas on social time and change: Sorokin lectures. University of Saskatchewan. 97 p.

THE CONTRIBUTION OF ARISTOTLE'S THOUGHT TO THE HISTORY OF MEDICINE: AN ESSAY

Paulo Nuno MARTINS[1]

ВКЛАД АРИСТОТЕЛЕВСКОЙ ФИЛОСОФСКОЙ СИСТЕМЫ В ИСТОРИЮ РАЗВИТИЯ МЕДИЦИНЫ: ЭССЕ

Пауло Нуно МАРТИНС

Abstract. This essay aims to describe the Aristotle's main ideas on the History of Medicine, such as the four elements, the biomedical theories, the four causes, the empirical researches on natural world.

Keywords: The four elements of Aristotle, Aristotle's thought on Medicine, the four causes of Aristotle, Aristotle's plan on empirical research.

Contents

Introduction

1. The contribution of Aristotle's thought to the history of Medicine: Part I
2. The contribution of Aristotle's thought to the history of Medicine: Part II
3. The contribution of Aristotle's thought to the history of Medicine: Part III
4. The contribution of Aristotle's thought to the history of Medicine: Part IV

Conclusion

Резюме. Цель этого эссе – описать основные идеи Аристотеля по истории медицины, такие как четыре элемента, биомедицинские теории, четыре причины, эмпирические исследования мира природы.

Ключевые слова: Четыре элемента Аристотеля, Аристотель о медицине, четыре причины Аристотеля, план Аристотеля об эмпирических исследованиях.

[1] New University of Lisbon, Caparica, PORTUGAL.

Содержание

Введение
1. Вклад Аристотелевской философской системы в историю развития медицины: Часть I
2. Вклад Аристотелевской философской системы в историю развития медицины: Часть II
3. Вклад Аристотелевской философской системы в историю развития медицины: Часть III
4. Вклад Аристотелевской философской системы в историю развития медицины: часть IV
Заключение

Introduction

Aristotle [1] was a true researcher whose writings embraced many subjects: physics, metaphysics/philosophy, biology, zoology, logic, ethics, poetry, linguistic, politics, etc. In this regard, I have to mention that the Portuguese Pope John XXI (Pedro Hispano), who was a philosopher and physician of the Medieval Ages, wrote some works linked with the Aristotelian philosophy. For example, *Summulae Logicales* (Collection on logical issues) is a systematization of Aristotelian logic applied to some theological issues [2]. In general, the worldview of Aristotle is *Teleological* (from Greek *Telos* = end or purpose) in the sense that everything develops with a purpose in order to achieve the perfection or God. I have to add that Aristotle´s thought is also *Organicist* because conceive the Nature and the Universe by analogy with an organism. This consists of matter (the body) and essence (the soul). On his *Second philosophy*, Aristotle argued that the Matter is characterized by four elements (earth, water, air and fire), while the Essence is related to the fifth element (ether). In this respect, on his *First philosophy*, Aristotle sought to study the first causes of all things, and proposed four causes, namely, the formal cause, the material cause, the efficient cause and the final cause. These views predominated during fourteen centuries.

The Aristotelian view was replaced by the Cartesian Mechanistic and Dualistic view of the Universe. Descartes argued that the body (*res extensa*) should be seen as a "machine" and completely distinguished from the soul (*res cogito*). This idea was supported by Newton, in his *Philosophiae Naturalis Principia Mathematica*, in the formulation of the Laws of Classical Physics [3].

In the 19th century, with Hegel, and in the 20th century, with August Bekker and the Berlin Academy, the study of Aristotle gained new prominence in several areas of knowledge [4]. So, this essay aims to show how some Aristotle´s ideas might be useful to the study of the History of Medicine [5].

1. The contribution of Aristotle´s thought to the history of Medicine: Part I

In the 5th century B.C., the philosopher Empedocles proposed the existence of four major elements (earth, fire, air and water) in order to explain the nature of

matter. In the 4th century B.C., the philosopher Aristotle took up this idea in order to contribute to the development of science, in particular Physics (which encompassed the Philosophy of mind and the Anatomy) or the *Second Philosophy* [6].

In terms of the History of Medicine, the idea of the existence of four elements was used by the physician Galen who associated them to the four humors of Hippocrates (Black Bile, Phlegm, Blood, Yellow Bile) to the study of the human body.

Thus, some contemporary physicians claim that in the Medieval Ages each human organ was related to the four humors of Hippocrates that were interconnected with the four elements of Aristotle. The balance between the four humors and the four elements would contribute to the good health of the patient [7].

2. The contribution of Aristotle´s thought to the history of Medicine: Part II

The ideas referred to above remain unchanged until the 16th century, when Andreas Vesalius performed dissections on human cadavers. Meanwhile, the study of the human body was held alongside the study of the soul, and there have been several investigations on the relationship between the concepts of the soul and the body [8].

In this regard, I have to mention that Aristotle was the first to perform dissection (in animals, not in humans) in order to ground his biomedical theories. In fact, in his description of the heart, he referred to "three chambers" connected to the lung. He also located the heart as the seat of the soul because the nervous system was not yet formulated in the Middle Ages. Furthermore, through the observation of an embryo, he defended the heart beating as the first sign of life [9].

In relation to the History of Medicine, I have also to point out that in the Western medicine, for a long time, the study of body and soul were seen from opposite perspectives. For example, during the Middle Ages, the Church exercised a strong repression to the sexed body (being seen as sinful), valuing only the soul. In this regard, many of the diseases (for example, leprosy) were seen as a sin committed by the patient. However, Aristotle argued that balanced actions of human beings depended on both body and soul [10].

Meanwhile, in the 17th century, Descartes proposed the separation of the body (exclusive domain of science and medicine) and soul (exclusive domain of philosophy and religion) – the *paradigm of Western medicine (conventional medicine)* [11]. Since then, the human body has been treated as a "machine". With the Industrial Revolution, the vision of the body had a more "free" perspective regarding the moral impositions of the Church. In the 19th century, with the Positivist philosophy, the body was seen as a mere instrument of study that should be considered only under the rational point of view.

However, in the 20th century, with the emergence of Psychology, the study of the mind was performed by several scholars. In this regard, Merleau-Ponty [12] has called into question the Cartesian perspective of separation of mind/soul and body.

Similarly, from the 18th century to the present day, some experiments carried out in the field of brain sciences have called into question the Cartesian Dualism and Mechanicism view of the world suggesting, on the contrary, that the mind and the

body are related between them [13]. In this regard, I have to mention that Aristotle considered the soul (form) and the body (matter) were made of bound substances [14], as I will explain in more detail in the next chapter that describes the four causes for the existence of things.

3. The contribution of Aristotle´s thought to the history of Medicine: Part III

Aristotle also developed the *First philosophy* of things (which may be translated as *Metaphysics*) and proposed the existence of four causes [15] for the manifestation of something, such as health (or disease) in the human body. These four causes are:

1) Formal cause (the essence of the body) – the soul;
2) Material cause (the body) – the organs, muscles, bones, (all the constituents of the body);
3) Efficient cause (who originated the body) – the creators of the body;
4) Final cause (the purpose of the body) – the realization of the soul.

Aristotle argued that everything had a first cause, which could be identified, and that all had an end due to this cause first [16]. Thus, Aristotle claimed that all things were made both by form/essence, soul (psyche) and by matter (body) – theory known as *Hylomorphism*. In his work designated by *De anima* [17] Aristotle argued that the soul is the vital principle that animated all the bodies, such as plants, animals and humans. However, the soul to each of these beings was different. Only human beings had a soul with a nutritious, perceptive and rational aspect. In this regard, an important statement is that «εί δη τι κοινον ερι πασης ψυχής δει λεγειν, ειη αν εντελεχεια η πρώτη σώματος φυσικού όργανικον», i.e. Stagirite defines soul as «*the first entelecheia of a natural functional [instrumental] organ [body]*» or the body is the *organon* (instrument) of the soul. Furthermore, the contents of *De Anima* led to the elaboration of eight treatises, known by the Latin title *Parva Naturalia* [18].

Nowadays, the psychological processes call for formal and mental causes advocated by Aristotle. In fact, Aristotelian methodology provided the framework for scientific research. Aristotle had a worldview which was concrete and practical. For example, the eye of the body (material cause) having a soul (formal cause), it is manifested through the "vision" (final cause). The creators of the body are the progenitors (efficient cause).

4. The contribution of Aristotle´s thought to the history of Medicine: Part IV

Aristotle also called for the systematic observation of the nature and so, he launched a plan of empirical investigation into the natural world, particularly in botany, zoology [19]. In this regard, I have to mention that the living and biological systems, such as the human being, are systems of self-organization which are interrelated and interdependent to each other, both physical, biological, social, psychological (and even spiritual) (described by «complexity theory» and «models of self-organization»).

For example, the biologists Maturana and Francisco Varela argue that biological systems after undergone through "critical points of instability" (linked to the so-called "revolutions" in society and/or "crises" of human self-consciousness), they generate a "more complex network" (the "Web of Life") according to the new demands of society and mankind [20]. This worldview is in accordance with the *organicist view* of Aristotle that was referred above.

Conclusions

Nowadays, what remains to be done in contemporary society is concretize an Integrate vision of society (as proposed by Aristotle), as a synthesis of Materialism with Idealism so that it might be experiences a new cycle in the lives of human beings in contemporary society [21]. In this regard, there are some scientists who have proposed the application of new methodologies that might bring an improvement in the living conditions of human beings [22] through a change of behaviors [23] that might contribute to make the mankind (as a whole) happier (as advocated by Aristotle) [24].

References

[1] Aristotle. (1984). *The Complete Works of Aristotle*. Princeton University Press.

[2] Martins, P. (2017). A brief biography of Pedro Hispano: A philosopher and physician of the Christian world. *International Journal of Philosophy and Theology*, 5(2): 44–46.

[3] Bauer, S. (2015). *The Story of Western Science: From the writings of Aristotle to the Big Bang*. W.W. Norton&Company.

[4] Bekker, A. (1831). *Aristoteles Graece – ex recognitione*. Deutsche Akademie der Wissenschaften zu Berlin. Academia Regia Borussica. Berolini.

[5] Lewes, G. (2017). *Aristotle: A chapter from the History of Science*. Diamond Publishers.

[6] Lang, H. (2007). *The Order of Nature in Aristotle´s Physics: Place and the Elements*. Cambridge University Press.

[7] Ranhel, A. and Mesquita, E. (2016). The Middle Ages contributions to Cardiovascular Medicine. *Braz. J. Cardiovasc. Surg*, 31(2): 163–170.

[8] Pires, M. (2014). Conceito de Alma. *Revista Gaudium Sciendi*, 6(1): 21–41.

[9] Longrigg, J. (1993). *Greek Rational Medicine*. Routledge.

[10] Porter, R. (2006). *The Cambridge History of Medicine*. Cambridge University Press.

[11] Martins, P. (2018). Descartes and the paradigm of Western medicine: An essay. *International Journal of Recent Advances in Science and Technology*, 5(3):32-34.

[12] Merleau-Ponty, M. (2002). *Phenomenology of perception*. Routledge and Kegan Paul.

[13] Damásio, A. (2005). *Descartes´s Error: Emotion, Reason and the Human Brain*. Penguin Books.
[14] Aristotle. (2001). *The Basic Works of Aristotle*. Modern Library.
[15] Aristotle. (1999). *The Metaphysics*. Penguim Classics.
[16] Lear, J. (1988). Aristotle: The Desire to Understand. Cambridge University Press.
[17] Lawson-Tancred, H. (2004). *De Anima*. Penguin Books.
[18] Shields, C. (2007). *Aristotle*. Routledge.
[19] Aristotle. (2015). *Essential Aristotle*. A&D Publishing.
[20] Capra, F. (1996). *The Web of Life. A New understanding of Living systems*. Anchor.
[21] Sorokin, P. (1957). *Social and Cultural Dynamics*. Extending Horizons Books.
[22] Brentano, F. (1978). *Aristotle and His world view*. University of California.
[23] Hall, E. (2019). *Aristotle´s Way: How Ancient Wisdom Can Change Your Life*. Penguim Press.
[24] Adler, M. (1997). *Aristotle for Everybody*. Touchstone.

APPROACHES TO TRADITIONAL CHINESE MEDICINE AND STEPPING INTO THE FUTURE – IN A BIOCOSMOLOGICAL VIEW

Runhu LI[1]

ПОДХОДЫ К ТРАДИЦИОННОЙ КИТАЙСКОЙ МЕДИЦИНЕ И ВСТУПЛЕНИЕ В БУДУЩЕЕ – В СВЕТЕ БИОКОСМОЛОГИИ

Жуньху ЛИ

Abstract. With the introduction and development of Western medicine in China and the continuous spread of the concept of integration of Chinese and Western medicine, after decades of collision and dialogue with Western medicine, Chinese medicine practitioners have studied their education model, medication ideas, diagnostic methods and medical principles. More and more have begun to favor Western medicine. The original exchange between Chinese medicine and Western medicine has become a unilateral invasion of Western medicine. Traditional Chinese medicine has moved toward an increasingly Westernized path. Nowadays, we can see that Traditional Chinese medicine treatment does not seek the principles of traditional Chinese medicine. The medicinal properties of traditional Chinese medicine have become a form, and the result is that its clinic effects are not significant. The patient's distrust has formed a situation in which Chinese medicine can't help. It is hard to believe that making Chinese Medicine into Western medicine and discard the principle of Traditional Chinese medicine but save the Chinese medicines alone have become the future of many Chinese medicine practitioners who specialize in studying Chinese medicine. This article believes that it is imperative to choose a better way to understand, spread and develop the knowledge of Chinese medicine, so that Chinese medicine is no longer as difficult as Chinese traditional culture, so that more people understand Chinese medicine, let more people approach Chinese medicine, and jump out of the Western medical model. Compared to Western medicine, only do we understand and develop Chinese medicine from the perspective of Bio-Cosmological view, we can give full play to the true strengths and advantages of Chinese medicine, and only guiding in this view, Chinese medicine can truly have a growing future.

Keywords: Traditional Chinese Medicine, Western Medicine, Biocosmological view, Development, future.

Contents

1、The situation of Chinese medicine – whether it can survive rather, and how to develop?
2、Approaches to Traditional Chinese Medicine in a Biocosmological View
3、Looking forward to the future of Chinese medicine
Conclusion

[1] The Institute for the History of Natural Sciences, Chinese Academy of Sciences, Beijing, CHINA.

Резюме. С внедрением и развитием западной медицины в Китае и постоянным распространением концепции о необходимости интегрировать китайскую и западную медицины, как и в результате десятилетий как диалога, так и коллизий с западной медициной – китайские специалисты-медики лучше изучили собственные модель образования, концепции лечения, методы диагностики и медицинские принципы. Но все более и более они стали отдавать предпочтение западной медицине. Первоначальный обмен между китайской медициной и западной медициной постепенно превратился в одностороннее вторжение западной медицины, и традиционная китайская медицина все более стала следовать западному пути развития. В настоящее время мы можем наблюдать, что лечебная практика традиционной китайской медицины (ТКМ) не всегда стала основывается на ТКМ-принципах. В результате, лекарственные формы ТКМ стали терять в своей клинической эффективности. Стало появляться и недоверие пациента, что сформировало ситуацию, в которой возникают случаи, когда китайская медицина не в состоянии помочь пациенту. Трудно поверить, но происходит трансформация китайской медицины в западную медицину, с отказом от принципов традиционной китайской медицины, за исключением сохранения китайских лекарств – что становится реальным будущим для многих китайских практиков медицины, специализирующихся на изучении ТКМ.

Эта статья полагает, что крайне важным моментом является определение лучшего способа – для понимания, распространения и развития знания о ТКМ; и чтобы китайская медицина перестала быть такой же сложной, как традиционная китайская Культура; значит, чтобы больше людей понимали китайскую медицину как наиболее подходящую в случае их заболевания; но, для всего этого, чтобы освободиться от доминирования западной медицинской модели. Как раз, используя Биокосмологический подход – для проведения сравнения с западной медициной, и для понимания и развития китайской медицины – мы имеем в перспективе возможность в полной мере оценить истинные сильные стороны и преимущества китайской медицины, и только руководствуясь этим знанием – ТКМ может действительно рассчитывать на будущее собственного развития и преуспеяния.

Ключевые слова: традиционная китайская медицина, западная медицина, Биокосмология, развитие, будущее.

Содержание

1 . Ситуация с китайской медициной – сможет ли она выжить, и как ей развиваться?

2. Подходы к традиционной китайской медицине с Биокосмологической точки зрения.

3 . Перспектива будущего развития китайской медицины

Заключение

1. The situation of Chinese medicine – whether it can survive rather, and how to develop?

We know that in China, even most of the hospitals of Traditional Chinese medicine that are set up independently, it seems that they have long been accustomed to using Western medicine theory to analyze and explain diseases, and even think that this is a more "scientific" and "superior" way, especially in the process of clinical diagnosis, due to the westernization of medical education itself, these Chinese medicine workers always use Western medical theory to guide their clinical diagnosis and medication. The reason for this phenomenon is various. For example, in 1929, Mr. Yu Yunxiu, who was highly regarded in the Chinese medical profession, actually launched a "Abolition of Chinese Medicine Act" and was approved by the government at that time. This crazy movement undoubtedly brought unparalleled weight to the development of Chinese medicine in the early part of the last century. The development of Traditional Chinese medicine was getting more and more difficult after that. And another example is that in the hearts of the Chinese people, the incomparably great and who is absolutely right – Lu Xun, the pioneer of the May Fourth Movement, always denounced Chinese medicine in his own article since his father did not receive reasonable Chinese medicine treatment. He wrote a famous sentence on Traditional Chinese medicine which maybe each Chinese people can recite it that "Traditional Chinese medicine is a kind of deliberate or unintentional liar"[2], there are countless similar meaning sentences he wrote in his own book, we have to admit that Chinese medicine has been long time departed from the altar in the eyes of today's Chinese people. It is no longer the first choice for ordinary people to seek medical advice.

Another cause of stigma and misunderstanding of Chinese medicine is the large number of counterfeit Chinese medicine practitioners. Due to the disconnection of knowledge and culture in contemporary China, many ordinary people believe that doctors who use Chinese medicine to treat diseases are Chinese medicine practitioners. They do not care about if these doctors are true Chinese medicine practitioners. What kind of theoretical method is the theoretical method of Chinese medicine? Of course, people are even less able to judge whether the Chinese medicines they use are manufactured under the theoretical guidance of real Chinese medicine practitioners. In short, as long as the doctors prescribed Chinese medicine, they think that they are receiving Chinese medicine treatment. Therefore, most Chinese people do not know what a real Chinese medicine practitioner is, and they cannot distinguish doctors who truly understand Chinese medicine from many Chinese medicine practitioners. This greatly increases the number of Chinese medicine scammers and it has caused negative impact and reputation on Chinese medicine. There are too many scammers in the ancestral Chinese medicine practitioners. They can even publicize themselves in the media; dare to declare that they even can cure some terminal cancers. The reason for this is actually very simple, because most of the Chinese people themselves do not understand Chinese medicine, nor do they understand the very difficult concepts in Chinese medicine.

[2] *See*: Lu Xun. *Call to arms & wandering*. Foreign Languages Press, 2014, Preface.

We must all admit that today, if a Chinese person is ill and wants to seek treatment, he will first think that Western medicine is fast, Chinese medicine is slow, Western medicine treats symptoms, and Chinese medicine treats diseases, that is, Chinese medicine can only Treating chronic diseases, while Western medicine can treat diseases quickly. What is the reason for this prejudice? If we really want to develop Chinese medicine, what should we do?

An utterance of the Chinese well-known medicine researcher Gann Zhuang is a noteworthy example:

> Now even pinch the back muscles, scraping, shaking hands, irregular acupuncture, ancestral secret recipes and other folk remedies, even obvious scams, are posted the label of Chinese medicine to deceive people. What is even more ridiculous is that even some shops that are obviously deceptive like beauty and hairdressing are labeled with Chinese medicine. This kind of sewage is flooding into Chinese medicine in all directions, and Chinese medicine may be the most unlucky one. But what is even more unbelievable and strange is why no one has come to shout that it is fake and deceptive. [3]

The master's words fully explain that Chinese medicine is not recognized and understood by everyone in China. If we do not know what the Chinese medicine is, then how can we know what is false?

We know that the true essence of Chinese medicine is its theory, and the so-called combination of Chinese and Western medicine is simply to let Chinese medicine learn Western medicine. Of course, we are not saying that Chinese medicine should not learn Western medicine, but that we believe that nowadays more and more Chinese medicine practitioners cultivated under Western medicine concept, those practitioners who do not understand Chinese medicine, they just use Western medicine theory to guide diagnosis and use Chinese medicine to make them known as Chinese medicine practitioners. Strictly speaking, they should be doctors using Chinese medicine, but not should be called a Chinese medicine practitioner. In the long run, in fact, there will be fewer and fewer people who truly understand Chinese medicine, and the right to speak of Chinese medicine will be less and less. No one cares about what real Chinese medicine is, so whether Chinese medicine still exists or not is no longer cared by people. It is precisely the reason why we believe that today's Chinese medicine is not faced with a question of how to develop, but a question of how to survive.

2. Approaches to Traditional Chinese Medicine in a Bio-cosmological View

We know that the existence and development of anything is inextricably linked to the value and role of its existence. The development of Chinese medicine cannot rely solely on the government. Finding the true value and significance of Chinese medicine is the key to the survival and development of Chinese medicine. Nowadays,

[3] *Taken from*: Tang Yun. *Understanding of Traditional Chinese Medicine – A Brand New way to Explore Health and Illness*. Guangxi Normal University Press, 2004, p. 3.

under the rule of Western discourse power, Chinese medicine can be said to be lingering and unable to gain its true development momentum. People can't know and understand real Chinese medicine under this discourse system. Therefore, we must find new ones. The path is to understand Chinese medicine, and to reposition Chinese medicine in a new perspective. Only in this way can Chinese medicine be reborn and gain a more rational foundation for survival and development.

In recent years, Biocosmology has become a unique school of thought. It implements an organic, dynamic, integral and moderate position. From the origin, it can be viewed as a Neo-Aristotelism based on contemporary context; from the research perspectives, it not only offers a special view on traditional resources, but also deeply explores profound implication of the transform in modern science; from the attitude toward, it tries hard to abandon X-centrism and advocates dialogues among civilizations from global vision; from the future purport, it points to bottlenecks of our civilization and makes an attempt to put forward wisdom for new civilization. Bio-cosmology provides good opportunities for East Asian civilization, and then will also become an important platform for Chinese academe to participate in international academic interaction[4].

We believe that the perspective of Biocosmological view is the best path we need to understand and know Chinese medicine. From the perspective of Biocosmological view, Chinese medicine could undergo the following changes. First of all, Chinese medicine practitioners will get a clearer positioning. It will make people complain about the means of diagnosis and treatment, and pay attention to the really valuable place in the theory of Chinese medicine at the same time. That is, Chinese medicine itself pays attention to the organic and holistic world, and it regards the human body as a complex organism. The quality of a single organ does not mean the overall good or bad of a person, we need to understand and treat the human body from an organic and holistic perspective, that is, the "whole-balance" view. From this perspective, compared to Western medicine, Chinese medicine can be said to be more scientific and more in line with the essence of life which is organic and natural.

Secondly, only by knowing the essence of human beings – an organic whole, can we better understand what true health is, and what real disease is. Here, I believe that if we use the perspective of Bio-cosmological view to understand health and disease, we will find that true health should be a kind of overall harmony and stability, and this overall harmony cannot rely on various checks and data from icy machine, it should be a relatively subjective feeling for humans with irrational elements. Only by paying attention to such subjective feelings can we find the real cause of the disease and obtain the most reasonable diagnosis and treatment plan. Blind pursuit of inspection methods and the results of the inspection as the nature of the disease, this is clearly a short-sighted approach. In doing so, it is impossible to ascertain the root cause of the disease, and it is even less clear what the disease means to the individual. In other words, if we do not look at the disease from the perspective of Biocosmological view, then we will always see something unreasonable. The

[4] *See*: Huang Chuangen & Du, Jiang. Biocosmology: A Neo-Aristotelism Based on Contemporary Context. *Studies in Dialectics of Nature*. Vol. 32, No.3, March, 2016.

option is, for a sick patient – which concept of health and disease to choose? Therefore, from the perspective of Biocosmological view, we will also find that Chinese medicine is more comprehensive and careful in considering health and disease, and in fact is a more responsible medical concept.

Thirdly, understanding Chinese medicine from the perspective of Biocosmological view, we will find that if Chinese medicine is an important traditional resource of Chinese civilization, it can obviously develop and improve. Therefore, true Chinese medicine both does not refuse to progress and does not reject modern science. Different from Western medicine, Chinese medicine emphasizes an inherent organic balance and regards the internal balance of the human body as the basis for judging health and disease, rather than setting a reference value like Western medicine. Use a reference value to judge health and disease, at this point, you may even find that Western medicine is not only unreasonable, but even somewhat arbitrary.

Fourth, as mentioned above, Chinese medicine's understanding of health and disease always takes the internal dynamic balance of the human body as the starting point. Therefore, the way Chinese medicine understands the disease is more inclined to link the disease with the dynamic balance and nature of the human body, not like Western medicine, microscopically treats disease as a change in molecules or genes. Two different ways of understanding the disease determine the difference in their methodologies. Specifically, before understanding and diagnosing, Chinese medicine practitioners have achieved a purpose and result[5] , that is, dynamic harmony. Therefore, it is to discover and understand diseases and complete treatment with known results, while Western medicine is followed, running behind different data, once you find incomprehensible data or phenomena, there is absolutely nothing to do. All those things show that the premise of Western medicine treatment is to set everything as unknown, and to obtain the diagnosis basis by discovering the data, this method is not useless, but used in super complex organic organisms such as humans, the treatment itself becomes blind[6] , and eventually the treatment becomes the story that a blind person and an elephant.

Finally, we know that most of Chinese medicine comes from natural plants, animals and minerals, especially plants. From the perspective of Bio-cosmological view, we also believe that traditional Chinese medicine is an important traditional resource under the Chinese medical culture and cannot be ignored. The valuable experience, although it is not the root of Chinese medicine, but it has been widely abused in modern times, so that not only Chinese medicine is misunderstood by people, but even Chinese medicine is not understood by people, but the role of traditional Chinese medicine should be played. Being truly recognized by all mankind and benefiting all mankind is an unshakable responsibility of every Chinese medicine researcher. It is worth mentioning that after the birth of the Nobel Prize for

[5] *See*: Warren Fischer and Yan Wu. *Practical Therapeutics of Traditional Chinese Medicine*. Paradigm Publications, 1997, p. 71.

[6] *See*: Diana Barbara Dutton (1988), *Worse than the Disease. Pitfalls of Medical Progress*. New York: Cambridge University Press, 1992, p. 237.

the study of Chinese medicine – Tu Youyou, more and more people begin to re-understand and study Chinese medicine, a valuable resource of Chinese culture. I believe that putting Chinese medicine in a reasonable position should be scientific research and development of Chinese medicine, which is good for Chinese medicine and can be very good to eliminate people's misunderstanding of Chinese medicine. In turn, Chinese medicine will also get new development opportunities.

In short, a Biocosmological view exhibits an organic, dynamic, and holistic position. Based on Biocosmological view, we can find that the experience of traditional Chinese medicine in the Natural history has the characteristics of practice, sophistication, collective cognition and ethics. This is not only useful for the constructive future of Chinese medicine, but also is the fundamental premise of its existence and development.

3. Looking forward to the future of Chinese medicine

A truly responsible attitude towards the survival and development of Chinese medicine should be a serious study of what is Traditional Chinese medicine. Only by seeing the essence of Chinese medicine is its overall-harmonious treatment principle, can we truly have real development and revolution of Traditional Chinese medicine. Looking at and understanding Chinese medicine from the perspective of Biocosmological view, Chinese medicine will not become Western because of comparison with Western medicine, nor will it become a maid of science because of using scientific methods. Chinese medicine is Chinese medicine, and it is one of most important resources of Chinese culture. Its philosophy of treatment and ways of looking at health and disease are full of practical value that today's science can't match. Therefore, the future of Chinese medicine is based on the following changes:

First of all, this is the shift of mentality. As mentioned above, countless pseudo-Chinese doctors swindle and swindle under the name of traditional Chinese medicine. The reason for this is most people essentially do not understand Chinese medicine, so they have been misguided and formed various misunderstandings. Therefore, the first problem need to be solved in the development of Chinese medicine is to reshape the concept of Chinese medicine in people's minds.

Secondly, on the basis of understanding and knowing Chinese medicine, we adhere to the essence of TCM as a whole and harmonious[7], and carry out the methodological changes of TCM diagnosis and treatment, so that TCM can perfect itself with the crystallization of the most advanced human wisdom, and better service for the health of all mankind.

Finally, train Chinese medicine professionals. The inheritance of culture needs to be cultivated from generation to generation. The two major problems facing the cultivation of TCM talents today are the Westernization of the training model, which itself cannot cultivate true Chinese medicine practitioners. The second is the scale and intensity of cultivation that is too small. Although the Chinese government has begun to vigorously support and invest funds to cultivate more and more Traditional

[7] *See*: Henry C. Lu. *Traditional Chinese Medicine: An Authoritative and Comprehensive Guide*. Key Porter Books, 2006, p. 17.

Chinese practitioners, it is still not enough. The strength of society also needs to be joined in order to exert a stronger force.

In short, there is a famous poem in China, "Of Mountain Lu we cannot make out the true face, for we are lost in the heart of the very place (不识庐山真面目，只缘身在此山中)". This is a very good expression of the Biocosmological view. Only by using the overall and comprehensive approach to the problem of organic cosmology can we seeing the whole picture of the mountain and understanding the whole truth of the mountain, the only way to truly understand Chinese medicine is to discover the true value of Chinese medicine so that we can ultimately better develop Chinese medicine.

Conclusion

The essence of Traditional Chinese medicine (TCM) is its overall-harmonious treatment concept. However, many fake Chinese medicine practitioners and non-Chinese medicine treatment methods in China today use the label of Chinese medicine to deceive people, especially because people lack in-depth understanding of Chinese medicine, which leads to majority of people even think that doctors who use Chinese medicine are Chinese medicine practitioners. Due to people's incomprehension, long-term policies and misleading society, the real problem of Traditional Chinese medicine today is not how to develop but how to survive. How to solve this problem, we believe that the problems faced by Chinese medicine practitioners today are on the one hand their own problems misunderstood by the public, on the other hand they are affected by Western medical concepts, if there is no strong new hermeneutics, then Chinese medicine will not be able to solve the problem of how to be understood and accepted by the public, how to survive and develop in the collision with Western medicine.

We rely on the Biocosmology as the contemporary unique school of thought. It actually implements an organic, dynamic, naturalist and integral approach. In this perspective, Chinese medicine could gain the value for its survival and development. Relying on the Biocosmological advantages[8], TCM becomes a promising Chinese and world medicine – human medicine with the right to life – the subject-matter for a successive rational efficient evolvement.

From the perspective of Biocosmology, we trust that Chinese medicine has its substantive great comprehensive (scholarly) foundation and its own concepts of health and disease (of what is lacking in the Western medicine). Based on this, we draw on the valuable wisdom of human development today and are aimed at the profound scholarly study and evolvement of the traditional Chinese medicine,

[8] In detail, see: Bremer, Josef; Khroutski, Konstantin S.; Klimek, Rudolf and Tadeusiewicz Ryszard (2017). "Challenging integralism, Aristotelian entelechy, hyle and morphe (form), and contemporary concepts of information, touching upon the etiological issues of carcinogenesis (with reflecting feedbacks of Paul Beaulieu, Ana Bazac, Anna Makolkin, Leonardo Chiatti, Milan Tasic and Dariusz Szkutnik)," *Biocosmology– Neo-Aristotelism* Vol. 7, No. 1 (Winter 2017), pp. 8–111.

including the Biocosmological approach. In this course, our prospect is to realize the true survival and actual evolvement of Traditional Chinese medicine – through the academic elucidation of the true scholarly foundations of TCM and the vigorous developing of Chinese medicine talents, of all – for making Chinese medicine even better for the good of mankind.

References

Bremer, Josef; Khroutski, Konstantin S.; Klimek, Rudolf and Tadeusiewicz Ryszard (2017). "Challenging integralism, Aristotelian *entelechy*, *hyle* and *morphe* (form), and contemporary concepts of information, touching upon the etiological issues of carcinogenesis (with reflecting feedbacks of Paul Beaulieu, Ana Bazac, Anna Makolkin, Leonardo Chiatti, Milan Tasic and Dariusz Szkutnik)," *Biocosmology–Neo-Aristotelism* Vol. 7, No. 1 (Winter 2017), pp. 8–111.

Dutton, Diana Barbara (1988). *Worse than the Disease. Pitfalls of Medical Progress*. New York: Cambridge University Press, 1992.

Fischer, Warren & Wu, Yan (1997). *Practical Therapeutics of Traditional Chinese Medicine*. Paradigm Publications.

Huang, Chuangen &Du, Jiang (2016). "Biocosmology: A Neo-Aristotelism Based on Contemporary Context," *Studies in Dialectics of Nature*. Vol. 32, No.3, March, 2016.

Lu, Henry C. (2006). *Traditional Chinese Medicine: An Authoritative and Comprehensive Guide*. Key Porter Books.

Lu, Xun. (2014). *Call to arms & wandering*. Foreign Languages Press.

Tang Yun. (2004). *Understanding of Traditional Chinese Medicine – A Brand New way to Explore Health and Illness*. Guangxi Normal University Press.

Book of abstracts

of the International scientific forum, held *at* the Novgorod State University named after Yaroslav-the-Wise, Veliky Novgorod, Russia on October 12-14, 2018;

which marks the jubilee of the International Academy of Ecology and Life Protection Sciences (IAELPS) – *20th anniversary of its Novgorod office*; jointly with the 18th International Symposium on Biocosmology (18ISBC),

***on the topic*:**

«Ecology and the human, societal and nature management safety in the era of Integralism – contemporary challenges and methodologies for their solution: Russian and world traditions and practices, new Biocosmological (neo-Aristotelian) perspectives»

***Organizers*:**
Novgorod State University named after Yaroslav the Wise (NovSU);
the Novgorod office of the International Academy of Ecology and Life Protection Sciences (IAELPS);
Biocosmological Association (BCA)

Biocosmological Association

for Universalizing Scientific and Philosophical Research based upon the Original Aristotelian Cosmological Organicism

Call for papers

***for* the International scientific forum , held on October 12-14, 2018,**
***at* the Novgorod State University named after Yaroslav-the-Wise,**
Veliky Novgorod, Russia;

which marks the jubilee of the International Academy of Ecology and Life Protection Sciences (IAELPS) – 20th anniversary of its Novgorod office;
jointly with the 18th International Symposium on Biocosmology (18ISBC),

on the topic:

«Ecology and the human, societal and nature management safety in the era of Integralism – contemporary challenges and methodologies for their solution: Russian and world traditions and practices, new Biocosmological (neo-Aristotelian) perspectives»

Organizers:
Novgorod State University named after Yaroslav the Wise (NovSU);
the Novgorod office of the International Academy of Ecology and Life Protection Sciences (IAELPS);
Biocosmological Association (BCA)

The modern era (the current 21st century), in relation to the foundations of sociocultural activities (including the scientific sphere), is characterized as the time for change; and the latter means, first of all, the task of putting forward new foundations of scientific activity. It is precisely in this perspective, marking the 20th anniversary of the Novgorod branch of the IAELPS, together with the 18th International Symposium of the Biocosmological Association – wherein we plan to analyze the current opportunities for using modern (already accepted and dominating) methods and practices in ecological (environmental) and biological activities, but their integration and shared use on the bases of new methodologies of scientific activity (which are required at the ongoing "time of change") and, accordingly, putting the latter (exploration and substantiation of new scholarly methodologies) at the centre of this scientific event.

Significantly, the Russian-American scientist Pitirim A. Sorokin substantiated, in his outstanding work (4-volume "Social and Cultural Dynamics", 1937–1941), That since the XIX century, the sociocultural world – in its dynamic cyclic development and successive replacement of the three main types of sociocultural organization – in our age, the sociocultural world has exhausted the possibilities of the previous Sensate type (based on the methodological foundations of the 17th century), and that the latter is long overdue for replacement by the new (Integralist) sociocultural order and its inherent foundations that are adequate for our (Integralist) 21st century. In other words, already for a long time, we do need a transition to the dominance of the following (next) type of general organic order, science and evolvement – the Integralist (integral, intermediate between Sensate and Ideational) sociocultural type (including the institute of science), and it has begun to take shape, and this switchover process is actively developing; however the effective transition to Integralism, which nowadays is even more in demand – it is (as a whole) still is off track, because the new (Integralist) bases for scientific and sociocultural activity are not yet realized.

In this way, the Lithuanian ecologist Edmundas Lekevičius (2006, in his work: "The Russian paradigm in ecology and evolutionary biology: *pro and contra*", available at the scholar's site – https://elekevicius.lt/) – he justifies the need for science to return to the development of the "Russian paradigm" in ecology as the radically different approach in science when compared with the currently prevailing Western positivistic (mathematical-physicalist) scholarly method – strictly reductionist, and which prohibits scientific assumptions on the existence and operation (within the natural things, including the subjects of ecological and evolutionary study) of inherent, telic or goal-driven and integrally organizing (holistic) causes and forces. In his approach, essentially, E. Lekevičius treats the "Russian paradigm" not in terms of antagonism and contrariety, but precisely in the way of essential integrating the possibilities of both approaches! Naturally, in the latter case, the immediate concern is to restore the essential ecological frameworks and backbones of the "Russian tradition" authors' conceptual constructions (in his paper Lekevičius mentions both the grants of Russian science: Vinogradsky and Vernadsky, noting their foundation of the holistic theory of Biosphere and the foundational concept of biogeocoenosis as the main element in the spatial and temporal organization Biosphere; and their followers – Perelman, Kuznetsov, Kovalsky, Ronov, Beklemishev, Kamshilov, Vologdin, Zavarzin, and others). Herein, the Lithuanian scientist places special emphasis on the commitment of Russian ecologists to a substantive, independent of Western doctrine, methodological grounds, which precisely are approving as leading in scientific world view the foundational principles of Dynamicity (of the inner genesis of a subject's life activity and growth potentials) and Cyclicity – recycling of ecological and evolutionary processes (based on the circulation of biogenic substances, firstly the trophic cycles, produced *from within*, that is, essentially having the Internal origin). In general, these grounds refer not only to ecological and biological sciences, but also to all other sciences that study life processes. Thereby, in 2009 Lekevičius wrote another article with the talking title "On some analogies between the evolution of ecosystems and the development of the economy: from A. Smith and Ch. Darwin to the latest ideas".

We should likewise pay close attention to another conclusion of the Lithuanian scholar, that modern biology and ecology follow the scientific methods borrowed in other sciences (studying inanimate nature, and based on the use of mathematical tools). However, the time is ripe for ecology (and biology in general) to generate and develop their own (for living things and animate nature) foundations and methodology – for studying the processes of life based on the recognition of the Organicist (naturalist, cosmist) aetiological and methodological Dynamicity, Cyclicity, Internal telic (goal-driven) potentiality and actuality, and the possession of abilities

both to Self-dependent whole organization (including a biogeocoenosis as the dynamic system), to the evolutionary Self-ascent of biological subjects in the complexity of their overall life organization. Still, however, we are being hostage to the situation in global science that was claimed by Vladimir I. Vernadsky yet in the 1930s. : "It took many years before I realized (in the mid-1930s) the backwardness of philosophy (in its global scale) in the historical moment in the life of mankind, which we are experiencing ... It stands in essence on the basis of the seventeenth century, not realizing the impossibility of studying new phenomena by «old furs» ..." [Vernadsky, 1988].

In general, we expect that scholars from Russia and other countries (both ecologists and biologists, as well as specialists from other fields) who agree with the proposed prospect of scientific research – that scholars will find our proposals interesting and consider their participation for elaborating the given topics as attractive and useful. It is also important to note that in the course of the Biocosmological Association's activities – we have accepted that a need is to restore the Aristotelian authentic conceptual *Organon*Kosmology as the basis and matrix for our development (in the prospects of Organicism and Integralism), first and foremost – for our scholarly clear mutual understanding. In fact, we do need some general (comprehensive) conceptual basis – the matrix (for implementation effective mutual understanding among colleagues, although they apply various scientific approaches, but who recognize the common grounds of the Organicist approaches to the study of physical reality (the substantial world). In our opinion, the best of the existing (matrix) bases is the Aristotelian *Organon*Kosmology (a super-system of all-encompassing rational knowledge that has the essence of Dynamic naturalism). Therefore, the organizers will welcome the correlations (references) of our (potential) participants' abstracts (and the main concepts of their presentations and papers) with the conceptual basis of the scientific Organicist doctrine of Aristotle (recognized world-wide as the Father of Science).

With kindest regards,

Chairman: **Nicolay N. MAXIMYUK**
Doctor of Agriculture Sciences, Professor at the Novgorod State University after Yaroslav-the-Wise; Full member (academician) of the International Academy of Ecology and Life Protection (AELPS); Academician of the Russian Academy of Natural Sciences; Corresponding member of the Russian Academy of Natural Sciences (RANS); Board member of the Biocosmological Association; Veliky Novgorod;
Email: nicmaxim@yandex.ru

Xiaoting LIU, Ph. D.,
the Biocosmological Association, President – http://en.biocosmology.ru/
Professor, College of Philosophy and Sociology, Beijing Normal University / Center for Science and Humanity Studies, Beijing 100875, China;
Email: liuxiaoting@bnu.edu.cn

Konstantin S. KHROUTSKI, Ph.D.,
the Biocosmological Association, Secretary – http://en.biocosmology.ru/
Assoc. Prof. at the Novgorod State University after Yaroslav-the-Wise,
Veliky Novgorod, Russia,
Academician of the International Academy of Science (Russian Section),
Editor, "Biocosmology – neo-Aristotelism", *Email*: konstantin.khrutsky@novsu.ru

Biocosmological Association

for Universalizing Scientific and Philosophical Research based upon the Original Aristotelian Cosmological Organicism

Сопроводительная записка

к Первому информационному письму по организации проведения

Международной научно-практической конференции –12–14 октября 2018г.,

приуроченной к 20-летию Новгородского отделения МАНЭБ, и 18 Международному симпозиуму Биокосмологической ассоциации – 18ISBC,

на тему:

«Экология и безопасность человека, общества и природы в эпоху Интегрализма – современные вызовы и методологии по их разрешению: Российские и мировые традиции и практики, новые Биокосмологические (нео-Аристотелевские) перспективы»

Организаторы:
Новгородский государственный университет имени Ярослава Мудрого (НовГУ);
Новгородское отделение Международной академии наук экологии и безопасности жизнедеятельности (НО МАНЭБ); Биокосмологическая ассоциация (БКА)

Приглашение к представлению резюме

Современная эпоха (текущий 21 век), в отношении к основаниям социокультурной (включая научную сферу) деятельности характеризуется как время перемен, что означает в первую очередь изменение (т.е. выдвижение) новых оснований научной деятельности. Именно в этой перспективе, отмечая 20-летие Новгородского отделения МАНЭБ, совместно с 18 Международным симпозиумом Биокосмологической ассоциации мы планируем цели как анализа текущих возможностей использования современных признанных методик и практик в экологической и биологической деятельности, так и их интеграции и совместного применения на основании новых востребованных (текущим

«временем перемен») методологий научной активности, и что изыскание и обоснование последних, соответственно, и становится делом первостепенной важности.

На самом деле, русско-американский ученый Питирим А. Сорокин обосновал, в своем выдающемся произведении (4-х томной «Социальной и культурной динамике», 1937-1941 гг.), что еще начиная с XIX века, социокультурный мир – в своем динамическом циклическом развитии и последовательной смене трех основных типов социокультурной организация – исчерпал возможности предыдущего Чувственного (Sensate) типа и давно уже потребовался (и начал оформляться) переход к доминированию последовательно следующего – Интегрального (Integral, промежуточного между Sensate и Ideational) типа социокультурной (включая институт науки) организации и развития. И хотя данный процесс и активно развивается, но до сих пор востребованный эффективный переход к Интегрализму буксует, и в числе основных причин здесь усматривается непроработанность новых (Интегралистских) оснований для научной деятельности.

Так литовский эколог Эдмундас Лекявичюс (2006; в работе: «The Russian paradigm in ecology and evolutionary biology: *pro et contra*»; доступной в режиме онлайн – https://elekevicius.lt/), ссылаясь на труд Г.А. Заварзина «Смена парадигмы в биологии» [1995] – обосновывает научную необходимость вернуться к развитию «русской парадигмы» в экологии как кардинально отличной от превалирующего на сегодня Западного позитивистского (математико-физикалистского) научного метода – строго редукционистского, и запрещающего допущения в экологической и биологической (эволюционной) природе наличия и действия *внутренних, целе*движимых и целостно организующих сил и причин. В своем подходе, Э. Лекявичюс призывает развивать «русскую парадигму» не в плане ее противопоставления западной, а именно в русле интеграции возможностей обоих подходов! Естественно, что в последнем случае требуется восстановить методологические основания и несущие концептуальные конструкции авторов «русской традиции» в экологии (в работе Лекявичюса отмечаются как гранды отечественной науки: Виноградский и Вернадский, с их основополагающей холистской теорией Биосферы и концепцией биогеоценоза как основного природного элемента в пространственной и временной организации биосферы, так и их последователи – Перельман, Кузнецов, Ковальский, Ронов, Беклемишев, Камшилов, Вологдин, Заварзин, и др.). Здесь литовский ученый сосредоточивает основное внимание на приверженности российских экологов существенным, независимым от западной доктрины, методологическим основаниям, а именно утверждающим в качестве ведущих в естественнонаучном восприятии мира фундаментальные принципы Динамичности (внутреннего происхождения потенциалов к осуществлению жизненной активности) и Циклического течения экологических и эволюционных процессов (на основе кругооборота биогенных веществ, в первую очередь трофических циклов, производимых *изнутри*, т.е. существенно имеющих Внутреннее происхождение). В целом, данные основания относятся не только к экологическим и биологическим наукам, но и ко всем другим наукам, изучающим процессы жизни. Так, в 2009 году Лекявичюс написал другую статью с говорящим названием «О некоторых аналогиях между эволюцией экосистем и развитием экономики: от А. Смита и Ч. Дарвина до новейших идей».

Другой ценный вывод, который делает литовский ученый, и к которому полезно прислушаться, что биологии и экологии следует в дополнение к ценным научным методам, заимствованным в других науках (изучающим неживую природу, и основывающихся на использовании математического инструментария) – экологии (и биологии в целом) следует, наконец, обрести свои собственные основания и методологию изучения процессов жизни, основанных на признании естественной (природной, космической) методологической Динамичности, Цикличности, Внутренней

целедвижимой потенциальности и активности, и обладания способностями как к Самостоятельной целостной организации (в том числе, в составе биогеоценоза), так и к эволюционному Само-восхождению биологических субъектов в сложности своей жизненной организации. Пока же сохраняется положение, как это и утверждал еще в 1930-х гг. Владимир Иванович Вернадский: «Прошло много лет, прежде чем я понял (в середине 30-х годов) отсталость философии (в мировом ее охвате) в переживаемый нами исторический момент в жизни человечества ... Она стоит в сущности на почве XVII в., не сознавая невозможности освоить новые явления “старыми мехами”...» [Вернадский, 1988].

В целом мы рассчитываем, что ученые России и других стран (как экологи и биологи, так и специалисты других направлений), согласные с предлагаемой перспективой научного поиска, найдут интересными наши предложения и посчитают возможным и полезным свое участие в развитии заявленных тем. Важно также отметить, что в свете деятельности Биокосмологической ассоциации (БКА), где принято придерживаться правила, что выдвижение, разработка и обсуждение предлагаемой инновационной деятельности, – все это объективно требует существования (для задействованных здесь ученых) некого общего концептуального основания – *матрикса* (для осуществления эффективного взаимопонимания между коллегами, хотя и применяющими различные научные подходы, но признающими общие основания Органицистского подхода к изучению реального мира). На наш взгляд, лучшим из существующих (*матриксных*) оснований является *Органон*Космология Аристотеля (суперсистема всеохватывающего рационального знания, имеющая сущность Динамического натурализма); поэтому организаторами будет приветствоваться соотнесение потенциальными участниками Конференции тезисов своих выступлений с концептуальной и понятийной базой научного учения Аристотеля (признанного во всем мире Отца науки).

С уважением и наилучшими пожеланиями,

Организаторы конференции:

Председатель: *Николай Несторович Максимюк* – профессор, почетный доктор наук; заслуженный деятель науки, действительный член (академик) Международной академии наук экологии и безопасности жизнедеятельности (МАНЭБ), академик Российской академий естествознания, академик Российской академии естественных наук (РАЕН), академик Петровской академии наук и искусств; Новгородский государственный университет имени Ярослава Мудрого, Великий Новгород; e-mail: nicmaxim@yandex.ru

Сяотин Лю (Xiaoting Liu, Ph.D.)
Президент Биокосмологической ассоциации – http://en.biocosmology.ru/
Профессор, Колледж философии и социологии, Пекинский педагогический университет / Центр науки и гуманитарных наук, Пекин, 100875, Китай; e-mail: liuxiaoting@bnu.edu.cn

Константин Станиславович Хруцкий
Секретарь Биокосмологической ассоциации – http://www.biocosmology.ru/
к.ф.н., доцент, Новгородский государственный университет имени Ярослава Мудрого, Великий Новгород
Академик Международной академии наук (Русская секция)
Редактор “Biocosmology – neo-Aristotelism” e-mail: konstantin.khrutsky@novsu.ru

Biocosmological Association

for Universalizing Scientific and Philosophical Research based upon the Original Aristotelian Cosmological Organicism

Programme

of the **International scientific forum, on October 12-14, 2018, *at* the Novgorod State University named after Yaroslav-the-Wise, Veliky Novgorod, Russia;**

which marks the jubilee of the International Academy of Ecology and Life Protection Sciences (IAELPS) – *20th anniversary of its Novgorod office*;
jointly with the 18th International Symposium on Biocosmology (18ISBC),

on the topic:

«Ecology and the human, societal and nature management safety in the era of Integralism – contemporary challenges and methodologies for their solution: Russian and world traditions and practices, new Biocosmological (neo-Aristotelian) perspectives»

Organizers:
Novgorod State University named after Yaroslav the Wise (NovSU);
the Novgorod office of the International Academy of Ecology and Life Protection Sciences (IAELPS);
Biocosmological Association (BCA)

Friday, October 12, 2018	
	12:30–13:00 : **Registration** *13:00 Opening Session (1)* : **Welcome addresses**
Efremenkov A.B., Veliky Novgorod Kozina A.M.	Chairman of the Congress Co-chair

Xiaoting LIU, China	President of the Biocosmological Association
Pevzner M.N., Veliky Novgorod	NovSU Vice Rector for International Affairs
13:30–18:00 Plenary session (2) : **Plenary discussions** *Chair* : **Nikolai N. MAXIMYUK**	
Nikolai N. MAXIMYUK, Veliky Novgorod	20th anniversary of the IAELPS Novgorod office – results of work, conclusions, future prospects
Rudolf KLIMEK Poland	The Cosmological aspect of Truth and Conscience in Medicine
Xiaoting LIU, China	On the deep-seated organic property of the universe
Sergey N. GRINCHENKO Moscow	Individual or community: who must prevail in safety informational society? Cybernetic point of view
Walter KOFLER, Austria	The increasing inhomogeneity of the power of science and an "Aristotelian" proposal to cope with
16-16:30 - **Coffee break**	
Hongwei DING, China & Kumar KHADKA, Nepal	Biocosmic Universe on the Whitehead's prospective
Konstantin S. KHROUTSKI, Veliky Novgorod	North/South methodological approaches to the contemporary ecology
Runhu LI, China	The Development of Arab Medicine in the Early Modern Times and Its Significance
18:30–20:00 ***Reception party***	
Saturday, October 13, 2018	
9:00–13:30 working sessions (3) : ***Contemporary challenges in the current era of Integralism and the methodologies for their solution*** *Chair* : **Konstantin S. KHROUTSKI**	
ZiXin DONG, China	Chinese Tea Art and Health Culture
Yan BAO, China	The Framework of *Contributions to Philosophy*
Vitaly G. SHOLOKHOV, Moscow	Aristotle's provisions on entelechy for substantiating periodic evolutionary processes in recent history

Kumar KHADKA, Nepal	Ancient Chinese "Tianxia" Political Philosophy – A Biocosmological world designed through "Shangshu尚书, Great Plan洪范"
Yulia L. SHCHAPOVA, Sergei N. GRINCHENKO Moscow	Harmony of Humankind's System Development in Archaeological Epoch
Alexei G. SHOLOKHOV Sochi	Forest growth law
15:00–17:30 Symposium, jointly with the «PUBLIC RESEARCH INSTITUTE OF HUMAN SOCIETY» (4) : **The scientific and educational model of the *Person Conscious* – in the development of ecology issues of society and culture** *Chair* : **Alexey S. KOZHEMYAKOV**	
Alexey S. KOZHEMYAKOV, Moscow and Sankt-Petersburg	Ecology for the 21st century: a new round of discussion, or a new methodological approach?
Andrei M. ANISIMOV Sankt-Petersburg	Tensor's interpretation of the "mechanics of Observer – towards the mathematical interpretation of the concept "Homo conscious"
Sergey Ju. GRADOV Sankt-Petersburg	The theory of institutions. Structural scheme of hierarchy of institutions
Oleg S. GORBATYH Sankt-Petersburg	The theory of consciousness – in the development of modern education
The general debate over the selected topics	
18:00–20:00 ***Friendly dinner***	
Sunday, October 14, 2018	
9:00–12:00 : **Discussing and summarizing the results of the Conference. BCA organizational issues** ***Closing session***	
Xiaoting LIU, China	Closing address
Chairs : **Nikolai N. MAXIMYUK and Xiaoting LIU**	
Cultural program	

Biocosmological Association

for Universalizing Scientific and Philosophical Research based upon the Original Aristotelian Cosmological Organicism

МАНЭБ IAELPS

Программа

Международной научно-практической конференции – 12–14 октября 2018 г.,

приуроченной к 20-летию Новгородского отделения МАНЭБ, и 18 Международному симпозиуму Биокосмологической ассоциации – 18ISBC, на тему:

«Экология и безопасность человека, общества и природы в эпоху Интегрализма – современные вызовы и методологии по их разрешению: Российские и мировые традиции и практики, новые Биокосмологические (нео-Аристотелевские) перспективы»

Организаторы: Новгородский государственный университет имени Ярослава Мудрого (НовГУ); Новгородское отделение Международной академии наук экологии и безопасности жизнедеятельности (НО МАНЭБ); Биокосмологическая ассоциация (БКА)
(*место проведения – Институт сельского хозяйства и природных ресурсов НовГУ, Великий Новгород, ул. Советской Армии, д. 7*)

Пятница, 12 октября, 2018	
	12:30–13:00 : **Регистрация** *13:00 Открытие (1)* : **Приветственные выступления**
Ефременков А.Б., Великий Новгород Козина А.М.	Председатель Конференции Сопредседатель
Лю Сяотин, Китай	Президент Биокосмологической ассоциации
Певзнер М.Н., Великий Новгород	Проректор НовГУ по международной деятельности
	13:30–18:00 Пленарное заседание (2) : **Пленарные выступления**
Максимюк Н.Н., Великий Новгород	20-лет деятельности Новгородского отделения МАНЭБ – результаты работы, выводы, перспективы на будущее
Рудольф Климек, Польша	Космологический аспект правды и совести в медицине
Лю Сяотин, Китай	О глубоко укоренившейся органической вселенной
Гринченко С.Н., Москва	Индивид или сообщество: кто должен превалировать в безопасном информационном обществе? Кибернетическая точка зрения
Кофлер Вальтер, Австрия	Возрастающая неоднородность науки и предложения Аристотеля как справиться с этим
*16-16:30 – **Кофе-брейк***	

Дин Хунвэй, Китай; Хадка Кумар, Непал	Биокосмическая Вселенная в перспективе Уайтхеда
Хруцкий К.С., Великий Новгород	Север/Юг методологические перспективы в современной экологии
Ли Жуньху, Китай	Развитие арабской медицины в эпоху Раннего Нового времени и ее значение
18:00–19:30 ***Ужин***	
Суббота, 13 октября, 2018	
9:00–13:00 рабочие сессии (3) : ***Современные вызовы в эпоху Интегрализма и методологии их решения*** *Председатель:* ***Хруцкий К.С.***	
Дун Цзысинь, Китай	Китайское искусство чая и культура здоровья
Бао Янь, Китай	Концептуальная схема *Вкладов в философию*
Шолохов В.Г., Москва	Энтелехиальные положения Аристотеля для обоснования периодических эволюционных процессов в Истории – преимущественно новейшей
Хадка Кумар, Непал	Древнекитайская политическая философия «Тяньши» – Биокосмологический мир, разработанный через «Шаншу» 尚书, «Великий план» 洪范
Щапова ЮЛ, Гринченко С.Н., Москва	Гармония развития системы человечества в археологическую эпоху
Шолохов А.Г., Сочи	Закон роста леса
13:30–14:30 ***Обед***	
15:00–17:30 Симпозиум, совместно с «НИИ Человеческого Общества» (4): ***Научно-образовательная модель Человек Сознательный – в развитии вопросов экологии общества и культуры*** *Председатель:* ***Кожемяков А.С.***	
Кожемяков А.С. Москва и Санкт-Петербург	Экология на XXI век: новый раунд обсуждения или новый методологический подход?
Анисимов А.М. Санкт-Петербург	Тензорная форма “механики Наблюдателя” (к математизации научной модели “Человек *Сознательный*”)
Градов С.Ю. Санкт-Петербург	Теории институтов. Структурная схема иерархии институтов
Горбатых О.С. Санкт-Петербург	Теория сознания – в развитии современного образования
Общая дискуссия по заявленным для обсуждения темам	
18:00–20:00 ***Ужин***	
Воскресенье, 14 октября, 2018	
9:00–12:00 : **Обсуждение и подведение итогов Конференции. Организационные вопросы БКА** ***Заключительное заседание***	
Лю Сяотин, Китай	Подведение итогов конференции
Председатели : Максимюк Н.Н. и Лю Сяотин	
Культурная программа	

PRESIDENTIAL ADDRESS

Xiaoting LIU[1]

ПОСЛАНИЕ ПРЕЗИДЕНТА

Сяотин ЛЮ

Dear Chairman, Colleagues and Friends,
Good morning everyone,
I am very happy to attend the meeting, we are here to meet!

You saw that I wore a very bright tie because I was particularly excited. I attended the meeting in California five days ago and then went back to China to apply for a visa. I rushed here today. Before I came to Novgorod, I knew that this was an old and beautiful city, but in my heart it was still connected with philosophy, because in the past ten years, Biocosmology has started from here to the world. Our meeting is the 18th session, which means that since the establishment of the Institute; it is almost twice a year. This is very high frequency in any international organization. This is also inseparable from the efforts of Professor Konstantin of your university. As for that, when I came, I not only felt that this was a beautiful university, but also that it was a university of all philosophy. It not only has its own philosophical pursuit, has its own philosophical achievements, but also has its own philosopher. I believe that in the global philosophical world, the city of Novgorod will be linked to philosophy, so I rushed here, to bless such a festive meeting.

The theme of this conference is related to the philosophy of life, which reflects the consistent pursuit of Biocosmology. We know that man is a living being. He is both a natural life and a spiritual life. We also know that what the world is often depends on what you look at. You look at it with inanimate eyes; the world is an inanimate matter. When you look at it with life, the world is a living being. In the morning we walked in the woods, watching the golden leaves fall, there is a kind of beauty that can't be said, that is a transformation of life. Perhaps what people feel is just beauty, but it is actually a way of showing life. Later we went to the castle, entered the church, and saw people praying. I suddenly realized that the spiritual process in prayer and the process of falling leaves of trees are actually the same process. There are many secrets in this world. When we use life's vision to experience it, we can feel and reveal it. Then we see a universe full of vitality. The life we feel is a meaningful organic life.

As we all know, there are many problems in the world, and human civilization has reached a turning point. The way we respond to the various challenges of human beings is to return to life. I am very happy that some people started it from Veliky Novgorod, so I came here with reverence and wishes.

Biocosmology has gone through a difficult and tortuous but fruitful path in the past decade, and its pursuit show its unique value as time went on, because only when we connect with the perspective of life, the future of mankind will be even better. To this end, we would like to thank Professor Konstantin Khroutski, his team and the university again. I sincerely wish the meeting a complete success!

[1] President, the Biocosmological Association; Beijing Normal University, CHINA.

20-ЛЕТ ДЕЯТЕЛЬНОСТИ НОВГОРОДСКОГО ОТДЕЛЕНИЯ МАНЭБ – РЕЗУЛЬТАТЫ РАБОТЫ, ВЫВОДЫ, ПЕРСПЕКТИВЫ НА БУДУЩЕЕ

Николай Несторович МАКСИМЮК[1]

20th ANNIVERSARY OF THE IAELPS NOVGOROD OFFICE – RESULTS OF WORK, CONCLUSIONS, FUTURE PROSPECTS

Nikolai N. MAXIMYUK

Международная академия наук экологии и безопасности жизнедеятельности (МАНЭБ) создана в 1993 году в Санкт-Петербурге. Устав МАНЭБ зарегистрирован в Министерстве юстиции РФ в 1994 году. В числе учредителей МАНЭБ были известные государственные, профсоюзные, общественные деятели и ученые России и Белоруссии: М.П. Весельчак, В.И. Медведев, И.И. Медведев, О.Н. Русак, А.Д. Сумочник, Э.В. Хоробрых, и др.

Целью МАНЭБ является «обобщение достижений мировой науки и решения актуальных проблем безопасности жизнедеятельности в области экологии, охраны окружающей среды, чрезвычайных ситуаций, безопасности во всех сферах человеческой деятельности». Задачи и основные направления деятельности МАНЭБ: исследовательская работа (выполнение программ по экологии и безопасности жизнедеятельности); международная экспертиза проектов; проведение конференций, семинаров, симпозиумов; пропаганда безопасности жизнедеятельности; создание и координация деятельности национальных и региональных отделений.

В настоящее время в составе МАНЭБ насчитывается 82 национальных и региональных отделения в разных странах мира и в Российской Федерации. Академия имеет коллективное членство в двух департаментах ООН (ЭКОСОС и ДОИ). В 1998 году решением Президиума МАНЭБ было открыто Новгородское отделение, которое возглавил д-р наук, профессор, академик МАНЭБ Н.Н. Максимюк. В структуре отделения работают 4 секции: экологическое образование, воспитание и формирование экологической культуры населения; управление экологическими рисками для предупреждения чрезвычайных ситуаций; ресурсосберегающие технологии и охрана окружающей природной среды; состояние окружающей среды и здоровье человека. Члены отделения проводят в этих направлениях исследовательскую, организационную, просветительскую и педагогическую деятельность.

Профессиональная деятельность специалистов (инженеров, химиков, экологов, и др.) требует глубоких знаний основ экологии и безопасности жизнедеятельности, так как в процессе их деятельности неизбежно происходит изменение окружающей природной среды. При этом негативные изменения преобладают с нанесением ей значительного ущерба. Сложившаяся ситуация выдвигает жесткие требования к специалистам: функциональная мобильность,

[1] Руководитель Новгородского отделения МАНЭБ; профессор Новгородского государственного университета имени Ярослава Мудрого, г. Великий Новгород.

экологическая компетентность, творческий подход к своей профессиональной деятельности. Среди приоритетных ценностей образования современные исследователи называют развитие творческого мышления будущего специалиста, позволяющего принимать целесообразные, оперативные и оригинальные решения в нестандартных профессиональных и жизненных ситуациях.

Сильно возросшие в настоящее время вызовы современного мира, динамика информационных потоков и темп жизни людей ставят перед каждым человеком, обществом в целом задачу не просто выжить в этом динамичном мире, но и сохраниться личностно и физически. Используя новые возможности этого мира, люди хотят достичь максимального успеха в своей личной, личностной, профессиональной деятельности. Сегодня время диктует свои условия человеку, ставит перед государством и обществом достаточно сложные задачи, которые требуют системного анализа, строго научного подхода в осмыслении происходящих социально-экономических, политических процессов. Эти процессы являются следствием проявления системных законов существования, развития человеческого общества и напрямую влияют на жизнедеятельность каждого человека в отдельности и всего общества в целом.

Сложность и глобальность этих процессов требует от современной науки междисциплинарного подхода к изучению этих закономерностей и, главное, подготовки научно обоснованных механизмов, которые могут быть использованы государством и обществом в управлении этими процессами и обеспечении безопасности жизнедеятельности граждан страны. Экологический кризис современного мира полностью доказал, что промышленная цивилизация уже не соответствует процессам развития человеческого общества, и не в силах контролировать отношение между человеком и природой. Обеспечение экологической безопасности, как главный приоритет существования и развития человека, стал постепенно заменять понятие «экономическое развитие». Общественность обеспокоена частыми вспышками региональных чрезвычайных ситуаций, их воздействием на Землю большим, чем экономические потери.

Учитывая сложную экологическую обстановку, сложившуюся в настоящее время, необходимо вести повсеместную работу по консолидации усилий для решения важных проблем экологии, охраны окружающей природной среды, безопасности во всех сферах деятельности и взаимоотношений человеческого общества и природы. Такое объединение усилий международного сообщества должно приобрести глобальный характер при решении многих проблем современности.

Экологию необходимо рассматривать в системе: экология – здоровье человека и общества – безопасность и качество жизни. При этом необходимо осознавать, что экологическая безопасность является частью национальной безопасности государства и находится в неразрывной связи с международной безопасностью других государств мира.

Рассматривая процесс экологизации, как нравственную позицию, члены Новгородского отделения видят своей главной задачей консолидацию усилий всех общественных организаций по профилю охраны природы, экологии и безопасности жизнедеятельности на принципах сотрудничества для предотвращения экологической катастрофы.

THE COSMOLOGICAL ASPECT OF TRUTH AND CONSCIENCE IN MEDICINE

Rudolf KLIMEK[1]

КОСМОЛОГИЧЕСКИЙ АСПЕКТ ИСТИНЫ И СОВЕСТИ В МЕДИЦИНЕ

Рудольф КЛИМЕК

The existence of human transcendental verbal world (ideas) means an informational resonance feedback: input $=^{i}$ output which is the quintessence of Biocosmos (see: video-documents[2] of the electronic world congress "Biocosmology and cancer" (http://tiny.pl/gnzdk-lectures Konstantin S. Khroutski, Rudolf Klimek, Karl Kratky, Xiaoting Liu, Josef Bremer, Peter Heusser, Walter Kofler, Joseph G. Schenker, Piotr Karocki).For example carcinogenesis is a slow and lengthy process before the natural self-organization of cancer occurs, which breaks away from the pernicious multicellular environment, and already in a new form (of cancer) is the first signal for activating systemic repair and defense mechanisms. Self-organization of dissipative cells to extend their cellular forms of life makes it easier to understand the difference between their emergence and cancer diseases that the public knows only of course for their last stage without understanding the patients' own leading role in carcinogenesis. Man for centuries did not take into account the possibility of penetration even through opaque objects newly discovered gravitational and finally informational rays. In the relation of the subject to the object as well as the subject to the subject the sight, light, color and form themselves are not only the subjective "perception" or "cognition", but first of all the original form of the information feedback in a given situational context in order to achieve a better level of human cooperation. Matter and energy are just two aspects of the threefold informational essence of the reality, what only man can describe using his senses and knowledge [$E =^{i} mc^2$]. Information has a significant impact on the lives and health of people already in the unique intrauterine human development stage, later in his upbringing, education, and finally, in regard to their own existence in society. Pregnancy is not only important due to the transmission of the human life, but also as the support of the psycho-emotional health of the family, which takes place in optimum condition of the woman's health. Procreation provides the emergence of the family as the most valuable supporting structure in the existence of the species, and therefore the primary task of the spouses is to ensure the birth at least of two children. Man consciously may limit procreation, which in many cases has already led to the real threat of denationalization of most developed societies.

Biocosmos is the informational four-dimensional spacetime being as a triune living universe understood by a mankind as a spontaneous mutual exchange of matter, information and energy between elementary its particles repeatedly affecting reaction of environment favorably to overcome deficits of the analytical philosophy

[1] Jagiellonian University, Krakow, POLAND.

[2] See "videos" at the section 14ISBC, of the BCA-website – http://en.biocosmology.ru

science. The Biocosmological Association (http://en.biocosmology.ru) explores the contemporary naturalism and states that Naturalism has a variety of connotations in various contexts, but they primarily mean its ancient Greek (Aristotelian) significance. Precisely this is the goal of the ***World Information University*** (WIU) with its motto: **Do not be afraid of Truth, and Do Telic Good!** and formula: **E=i mc2**, wherein "i" has basically the meaning of *Telic* Aristotelian Information, which relates essentially to the naturalist (*telic*) notions of *Hyle*, *Morphe*, and *Entelecheia.* The fundamentals for its *methodology* are the principle of *auto-teleology* of John Paul II, recognizing the Triadological essence of rational knowledge (see the explanation at the BCA-site – http://en.biocosmology.ru/). In expressing admiration and in offering encouragement to pioneers of scientific research John Paul II urged them to continue their efforts without ever abandoning the *sapiential* horizon within which scientific and technological achievements are wedded to the philosophical and ethical values of the human person. The faith and reason mutually support and influence each other, as they offer to people a purifying critique and a stimulus to pursue the search for deeper understanding both their capacity to know the truth and their yearning for the ultimate and definitive meaning of life, the true, the good and the beautiful[3]. The interpretation of the same statement by several people result from the fact that each of person has their own life experience influencing the way of thinking and understanding speech and the message itself can be done in completely different situations using speech, mimicry, and voice intonation4. Now the interpersonal communication we have perceive in the categories of information feedback (***E=imc2***) in a given situational context in order to achieve a better level of cooperation. This phenomenon of resonance is commonly used in imaging the internal state of the body by means of nuclear magnetic resonance, where the electromagnetic field leads to technically resonant only atoms of selected elements. Their behaviour can detect cancer and firstly the place of their potential self-organization and, as a result, the onset of cancer. Similarly, the whole person resonates to an even single word, if he understands it and wants to know how much he can use the information he carries.

The essence and existence of information rays and pattern was proved by experimental documentation of sight's nature as third integrated part of reality which can be revealed by intellectual observations. The same result can be seen using the mirror at which by intellectual observations. The same result can be seen using the mirror at which everybody is looking every day.The eye sees the forms of things, consisted of many visible and detailed features, because it is impossible to see only one trait in isolation feverybody is looking every day.The eye sees the forms of things, consisted of many visible and detailed features, because it is impossible to see only one trait in isolation from other traits. Always in the form visible to the senses, more features are gathered simultaneously and distinguished only in the imagination

[3]Given in Rome, at Saint Peter's, on 14 September, the Feast of the Triumph of the Cross, in the year 1998, the twentieth of His Pontificate.

[4] It should be remembered that in the verbal information transmission process, interference may occur on both the sender's and the recipient's side. Not always the recipient reads the transmitted message in the same way in which the sender issued it.

with the help of discriminating ability. Mirror picture appears thanks to resonating informational field ("pattern information") in place of observer's localization, wherein the information rays coming from real object and from eyes meet together and have the identical value of their unique waves. Information is transparent (therefore for man hidden!) in each cosmic part and emerges under appropriate conditions rather than as the elements of the object, existing in any object among its elements as not visible but potential attribute. For example cancer cells are foreboding signals on the last human way to die and therefore man should trying to treat the carcinogenesis instead to cure only the cancer diseases, because first cancer cell only indicates the insufficiency of organism self-control to exist. As people get older their cells start to "slow down" or become less effective and unable to mount as quick and/or strong any response as a younger person. Therefore a special place is taken by heredity and the upbringing of a person, who, due to his free will, lives according to his own auto teleological scale of values and rules of social life. Each person can express information about his inner human state to the outside.

Man is endowed with free will, which ensures a good and functioning social life, as long as the eternal laws of nature are followed. Humans do not create these laws, but can only strive to understand them better in order to use them, e.g. taking into evaluation the character of cancers or infertility and why the prolongation of human lifespan increases the number of neoplastic illnesses as the organism ages, but the ageing is not illness! It has also shown the increased need for treatment of the illnesses coexisting with the neoplasms, which lie in the various medical disciplines. It seems that the basic regulator of the existence and development of a mankind runs through selective elimination of individuals least suited to the common environment what guarantees the continuous development of the Homo sapiens species. Information determines not only the self-organization of the universe in addition to matter and energy, but also it is the inextricably linked source of sensory and intellectual cognition. Therefore K. Khroutski demands increased methodological medical procedures on the side of health and not only on the side of predominantly diseases, as is the case today. In treating neoplasms doctors use scalpels, lasers, radioactive radiation and even poisons as effective tools, part of which is also language, made up of words, which are understandable by patients as necessary factor in all medical prevention and prophylaxis so that everyone could understand the primary significance of own personal life style in the formation of social health along with importance of caring about the environment inhabited by people. Dynamicity of life processes means the inner self-regeneration of a subject's life activity and growth potentials. Thus each body cell threatened with the end of its metabolism may extend its life in the form of a neoplasm cell by decreasing the production of its own entropy together with the increase of dissipation of information, mass and energy in the environment, because its total value must be greater than zero. This dissipation becomes a local sign of the beginning of an illness threatening the existence of the whole multi-cellular organism. Due to modern technology one may define the most endangered parts of the organism via magnetic resonance imaging with spectroscopy. Finally, the modern thermodynamic methods found a direct use to

determine the characteristic changes in cells undergoing carcinogenesis in form of the local formulation of the second law of thermodynamics saying that the negative source of entropy generates its positive source! It means that in the universe good always defeats evil. What more, the natural laws work harmoniously without the involvement of humans, who only interpret the universe more or less correctly and may disrupt it locally, but not globally! Already Leonardo da Vinci stated that nature does nothing in excess or with mistakes, while John Paul II added that: "modern man seems to be continually endangered by what is his own creation". The beginning of Universe is hidden for man due to its informational essence, which as information until formulation of equation $E =^{i} mc^2$ has appeared in different forms and names, e.g. God, Truth, Tao, Jahwe, Buddha, entelecheia, etc. as the beginning of all things, where lives the secret. It is man's purpose to examine truth via reason, and that is his dignity". Each person's unique identity appears in the moment the two gametes with different parental identities merge into new cell called – zygote, which biological importance is demonstrated by the huge selection from millions of active spermatozoa and hundreds of thousands of egg cells to be used at the moment of conception. The journey through death towards life is a mystery of an inter-generational transfer of life between individuals and generative cells of the grandparents, because the fetal somatic cells also developed from the parental zygotes, from their gametes' stem cells. Once death occurs, the atoms of which the body is made – fall apart into independent entities, but the person's past deeds leave behind accessible information about his unique life, which already began in the program of his own zygote, and still exists in his informational legacy or in the social memory of individual life.

The truth about the natural cause of cancer, which is commonly defined as all neoplastic diseases, astounds people. The word 'truth' as the informational opposite of 'lie' has a triple meaning, because it is not only the name of an event (structure or process) at the same time proving its real existence, but also means it is identical with the name of each structure or process it describes. The concepts of truth and lies, like good and evil, are used to define the psycho-emotional state of a man, who has the capacity to be astounded.

Astonishment is a fact felt by people, it exists just like emotions of friendship or love. Unfortunately, these concepts, until recently, were considered in isolation from the three-fold reality of matter, energy, and information. Everyone knows that certain words can easily lead to loss of friends, a break of friendly relations, and maybe not always a loss of love, but it never leads to the disappearance of remorse.

Man, by living and working, defines his relationship with his own existence, which is linked with self-evaluation of his achievements and his motivation for performing them. Prof. Ryszard Tadeusiewicz developed a method of the abstract modeling of reality, based on the development of an (imaginary) information model of human reality, subsequently testing it in practice. For decades the formation and causes of cervical cancer have been studied, in order to model all neoplastic diseases (including psychological ones), then completing Einstein's equation ($E=^{i}mc^2$). The equal sign (=) in the formula denotes matter and energy as equal and the same, and

raised to the power of information ($=^{i}$) it defines the information's part in the equation. From the time of Plato, the universe was understood as the abstract soul and the matter-energy body of a person, who, through words, can express his psycho-emotional state.

Through such models, and not only through theoretical considerations, truth can be defined as the existence of each event in a quantum state, from its beginning to its end form. This is so because the beginning of each event belongs to its cause, but at the same time is already part of its effect. The decision about the truthfulness of an event can be in accordance with it, or it can be a lie based on bad conscience. Truth as an informational event resonates with human conscience ($P=^{i}S$). The twentieth century has seen the introduction of a dangerous informational illness in people bent on wealth and power, who intimidate and lie to others. It is enough to apply existing law to their cases to end this medical terrorism.

It is best to follow accepted authority, which has an influence on the current state of society as its social conscience. In the last one hundred years of Almae Matris Cracoviensis John Paul II, Krzysztof Penderecki and Ryszard Tadeusiewicz, correspondingly personified information, energy, and matter. Using concepts and words invented by people, and their cybernetic interpretation, one can understand and describe reality, as represented by the equation $E=^{i}mc^{2}$. For example, in the reviewing of our paper, Khroutski demands increased methodological medical procedures on the side of health and not only on the side of predominantly diseases, as is the case today.

Every human reacts to his own consciousness (which resonates with its information field), to the sounds, signs and words of directly observed material objects and / or to the indirect energetic changes in their material form of existence. Symbols represent or express certain concepts in logic, mathematics, music, chemistry, astronomy, physics, and art. Philosophically, every word has the function of substituting a certain occurrence, creating a corresponding psychological or emotional state in a person's mind. This is where moral self-evaluation lies – called human conscience, which, independent of free will, shows the congruency of man's existence with the laws of nature. Each person can express information about his inner human state to the outside, but cannot negate his conscience.

The concept of truth is one of the natural laws, which people with the lack of understanding thereof, try to conceal in self-made laws or rules. Man is endowed with free will, which ensures a good, functioning social life, as long as the eternal laws of nature are followed. Humans do not create these laws, but can only strive to understand them better in order to use them. In "Life of Galileo", B. Brecht wrote: "He who does not know the truth is only a fool. But he who knows it and calls it a lie, is a criminal." Luckily, conscience also fulfills gratifying functions, such as the feeling of satisfaction or happiness which comes from performing a good deed, or even from simply differentiating good from evil.

Biocosmos is the informational four-dimensional spacetime being as a triune living universe understood by a mankind as a spontaneous mutual exchange of matter, information and energy between elementary its particles repeatedly affecting reaction of environment favorably to overcome deficits of the analytical philosophy

science. The Biocosmological Association (http://en.biocosmology.ru) exploring the contemporary naturalism stated that modern naturalism has a variety of connotations in various contexts, but they primarily mean its ancient Greek (Aristotelian) significance. Precisely this is the goal of the ***World Information University*** (WIU) with its motto: **Do not be afraid of Truth, and Do Telic Good!** and formula: **E=i mc2**, wherein "i" has basically the meaning of *Telic* Aristotelian Information, which relates essentially to the naturalist (*telic*) notions of *Hyle*, *Morphe*, and *Entelecheia.* The fundamentals for its *methodology* are the principle of *auto-teleology* of John Paul II, recognizing the Triadological essence of rational knowledge (see the explanation at the BCA-site – http://en.biocosmology.ru/). In expressing admiration and in offering encouragement to pioneers of scientific research John Paul II urged them to continue their efforts without ever abandoning the *sapiential* horizon within which scientific and technological achievements are wedded to the philosophical and ethical values of the human person. The faith and reason mutually support and influence each other, as they offer to people a purifying critique and a stimulus to pursue the search for deeper understanding both their capacity to know the truth, the good and the beautiful[5]. Now the interpersonal communication we have perceive in the categories of information feedback **E=i mc2** in a given situational context in order to achieve a better level of cooperation. This phenomenon of resonance is commonly used in imaging the internal state of the body by means of nuclear magnetic resonance, where the electromagnetic field leads to technically resonant only atoms of selected elements. Similarly, the whole person resonates to an even single word, if he understands it and wants to know how much he can use the information he carries.

The essence and existence of information rays and pattern was proved by experimental documentation of sight's nature as third integrated part of reality. The same result can be seen using the mirror at which the eye sees the forms of things, consisted of many visible and detailed features, because it is impossible to see only one trait in isolation. Always in the form visible to the senses, more features are gathered simultaneously and distinguished only in the imagination with the help of discriminating ability. Mirror picture appears thanks to resonating informational field ("pattern information") in place of observer's localization, wherein the information rays coming from real object and from eyes meet together and have the identical value of their unique waves. Information is transparent (therefore for man hidden!) in each cosmic part and emerges under appropriate conditions among its elements as not visible but potential attribute. For example cancer cells are foreboding signals on the last human way to die and therefore man should trying to treat the carcinogenesis instead to cure only the cancer diseases, because first cancer cell only indicates the insufficiency of organism self-control to exist. As people get older their cells start to "slow down" or become less effective and unable to mount as quick and/or strong any response as a younger person. Therefore a special place is taken by heredity and the upbringing of a person, who, due to his free will, lives according to his own auto teleological scale of values and rules of social life. Information determines not only

[5]Given in Rome, at Saint Peter's, on 14 September, the Feast of the Triumph of the Cross, in the year 1998, the twentieth of His Pontificate.

the self-organization of the universe in addition to matter and energy, but also it is the inextricably linked source of sensory and intellectual cognition. Therefore K. Khroutski demands increased methodological medical procedures on the side of health and not only on the side of predominantly diseases, as is the case today. Doctors use scalpels, lasers, radioactive radiation and even poisons as effective tools, part of which is also language, made up of words, which are understandable by patients as necessary factor in all medical prevention and prophylaxis so that everyone could understand the primary significance of own personal life style in the formation of social health along with importance of caring about the environment inhabited by people.

Due to modern technology one may define the most endangered parts of the organism via magnetic resonance imaging with spectroscopy. Finally, the modern thermodynamic methods found a direct use to determine the characteristic changes in cells undergoing carcinogenesis in form of the local formulation of the second law of thermodynamics saying that the negative source of entropy generates its positive source! It means that in the universe good always defeats evil. What more, the natural laws work harmoniously without the involvement of humans, who only interpret the universe more or less correctly and may disrupt it locally, but not globally! Already Leonardo da Vinci stated that nature does nothing in excess or with mistakes, while John Paul II added that: “modern man seems to be continually endangered by what is his own creation”. The beginning of Universe is hidden for man due to its informational essence, which until formulation of equation E =i mc2 has appeared in different forms and names, e.g. God, Truth, Tao, Yahweh, Buddha, entelecheia, etc. as the beginning of all things where lives the secret. It is man’s purpose to examine truth via reason, and that is his dignity. Each person’s unique identity appears in the moment the two gametes with different parental identities merge into new cell called – zygote, which biological importance is demonstrated by the huge selection from millions of spermatozoa and hundreds of thousands of egg cells to be used at the moment of conception. The journey through death towards life is a mystery of an inter-generational transfer of life between individuals and generative cells of the grandparents, because the fetal somatic cells also developed from the parental zygotes, from their gametes' stem cells. Once death occurs, the atoms of which the body is made – fall apart into independent entities, but the person's past deeds leave behind accessible information about his unique life, which already began in the program of his own zygote, and still exists in his informational legacy or in the social memory of individual life. The concept of truth is one of the natural laws, which people with the lack of understanding thereof, try to conceal in self-made laws or rules. Man is endowed with free will, which ensures a good, functioning social life, as long as the eternal laws of nature are followed. Humans do not create these laws, but can only strive to understand them better in order to use them.

INDIVIDUAL OR COMMUNITY: WHO MUST PREVAIL IN SAFETY INFORMATIONAL SOCIETY? CYBERNETIC POINT OF VIEW

Sergey N. GRINCHENKO[1]

ИНДИВИД ИЛИ СООБЩЕСТВО: КТО ДОЛЖЕН ПРЕВАЛИРОВАТЬ В БЕЗОПАСНОМ ИНФОРМАЦИОННОМ ОБЩЕСТВЕ? КИБЕРНЕТИЧЕСКАЯ ТОЧКА ЗРЕНИЯ

Сергей Николаевич ГРИНЧЕНКО

Keywords: *individual, community, natural systems, social self-control, cybernetic approach, adaptive behavior, hierarchic search-optimizational model, informational society*

1. The discovery of individual and society phenomena ratio is explored mainly by philosophical and political sciences representatives. Considering *the politics of the social self-control in informational society*, we apply the cybernetic approach to resolving this problem.

2. In particular, for this rationally to uses the hierarchic search-optimizational model of adaptive behavior of natural systems [2-10] (fig. 1). In its frameworks the representatives of each tiers in hierarchy exhibit *searching activities*, affecting on the highest in hierarchy and integrating these action tier. Last determines (with certain inertia) the *goal criteria* of adaptive behavior of all component corresponding hierarchic subsystem (of energy character): extremum kind and constraints of equalities and inequalities. The positive results of adaptive behavior consolidate in *system memory*, negative – eliminate the system contribution of corresponding components (then and other occurs with the corresponding inertia).

3. Effectively operating representatives of hierarchic tiers of natural systems (e.g. the cells or the organisms), embedded as "nested doll" in target-defining tier (respectively the organism or the biogeocenose), varying its own behavior, seek to reach (by analogy with Aristotelian *causa finalis* and with extremum or variational principles of mechanics [1]) *general for all, collective*, the energy optimum, and by *no means the individual* optimums, their for each!

4. This fundamentally is in contrast to preached by the many politic-economic theories and prevailing today in practices the orientation in priority of personal goals of individuum in it ostensibly "confrontation" with community.

5. As is presented, informational it is possible to name the society, the members of which associate among themselves by means of information technologies: from mime/gestures and speech/language up to computer and network [3].

6. Logically to suppose, that the informational society becomes by *safe* from destabilizing internal and external influences, only if its structure, function and algorithms of adaptive behavior are *harmonious* and self-adjusted within frameworks of the corresponding social system.

[1] Institute of informatics problems of the Federal Research Centre "Informatics and Control" of RAS, Moscow.

7. The last is reachable with concordance of individual and public goal functions of adaptive co-evolution and adaptive behavior of the humans, forming the community.

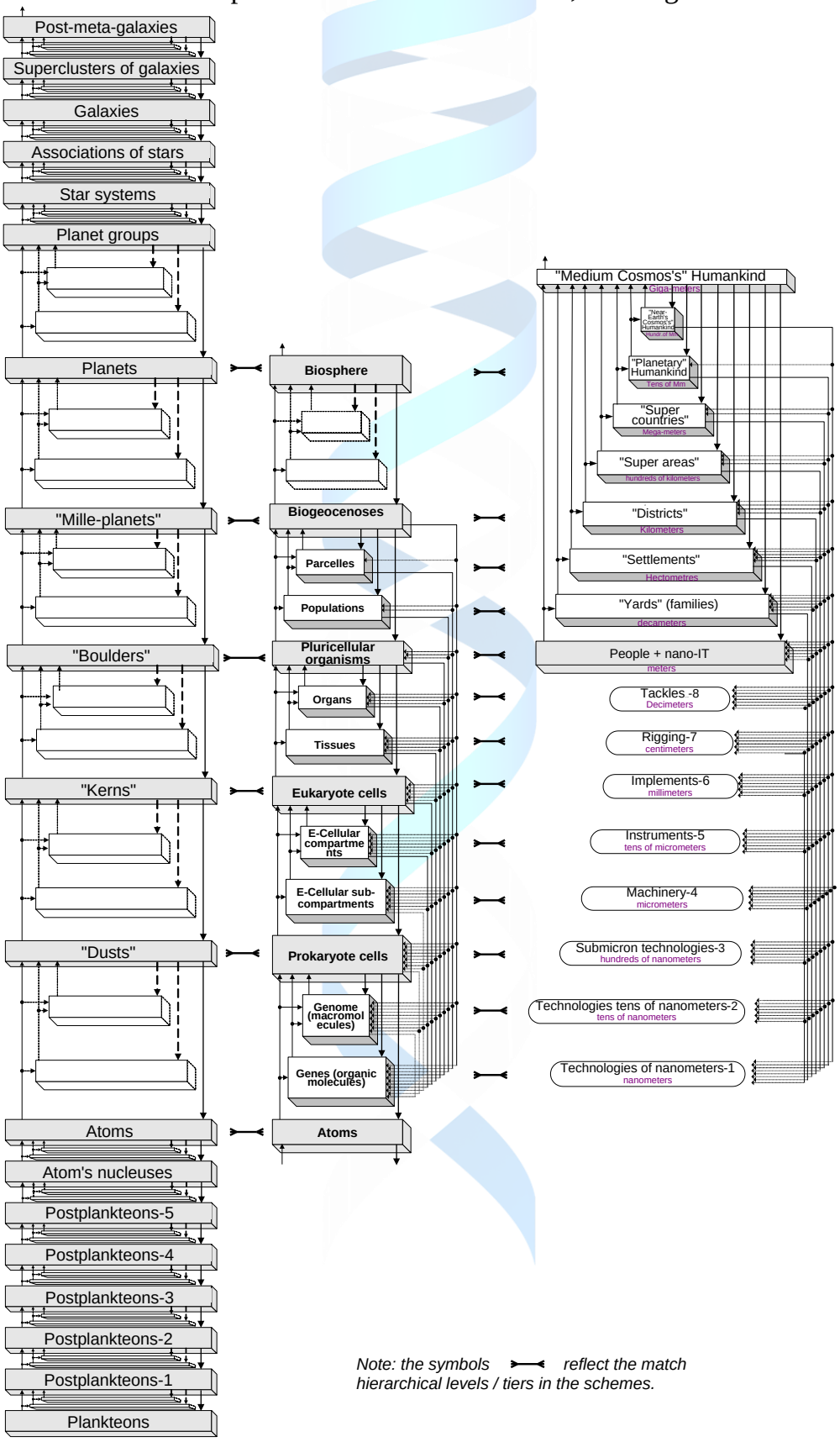


Fig.1. Schemes of hierarchical search and optimization systems (from left to right): inanimate nature, animate nature, personality-production - social nature.

References

1. Asseev V.A. Extremum principles in natural science and their philosophical content. Leningrad: LSU Publishing House, 1977. 232 p.
2. Grinchenko S.N. System memory of life (as the basis of its meta-evolution and periodic structure). Moscow. IPI RAS, Mir, 2004. 512 p.
3. Grinchenko S.N. Meta-evolution (of inanimate, animate and social-technological nature systems). Moscow. IPI RAS, 2007. 456 p.
4. Grinchenko S.N. Informatics-cybernetic aspect of Universe // 1st International seminar on Bio-cosmology, 22-25 July, 2010. Set of articles. Theses. Novgorod Veliky: Novgorod State University. Yaroslav the Wise, Pp. 54–57.
5. Grinchenko S.N. Meta-evolution of Nature System – The Framework of History. Social Evolution & History. 2006. V.5. No.1. Pp. 42–88.
6. Grinchenko S.N. The Pre- and Post-History of Humankind: What is it? Problems of Contemporary World Futurology. Newcastle-upon-Tyne: Cambridge Scholars Publishing. 2011. Pp. 341–353.
7. Grinchenko S.N. Aristotelian Goal-Driven Cause and Biological Modeling // Electronic journal "Biocosmology – neo-Aristotelism", 2012, Autumn, Vol.2, No.4, Pp. 319–325.
8. Grinchenko S.N. Cybernetic View on Hierarchical Structure of the Human Psyche // Electronic journal "Biocosmology – neo-Aristotelism", Vol.3, No.3 (Summer 2013), Pp. 482–488.
9. Grinchenko S.N. Aristotle's Organicism in Context of the Cybernetic Picture of World // 8th International Seminar on Biocosmology, 12-13 November, 2014; Chung-Ang University, Seoul, Korea. Book of Abstracts. Pp. 27–31 – https://743202a8-a-62cb3a1a-s-sites.googlegroups.com/site/biocosmologyen/8th-international-seminar-on-biocosmology-12-13-november-2014-chung-ang-university-seoul-korea/book-of-abstracts/8ISBC__Book-of-Abstracts.pdf?attachauth=ANoY7coBZaj2tHHMFZr6Z9lmkWL-CLbJFXIikYqI6z6q3JoIWgElBAmWga6cW3p0fRPpQnez7LkOxUwWulmSihuBKCvGcDQjHL7YsDSAYxmsqGewG2Wd3NVfcOr5sRzrfO5SrYlsmUvux5-iaPjhPzaXSSxw2V9qzI3e-20ngOfzTG-16EzOSCe6eNktgof68r7TI5qnWTACq1vsG49FlXrZV_EQf2_-7fB1iuS8FyNxSB35wLaRthH3T0egcn25N9bjXK_yRpw3MsSBh2TlCYrcMgNzHMhYKOPNcLAZqACk1Q00CqPg_kgCliLPfJX67ZHLSfSa6Qi187Eb3PsC8lKKFJ-MInVDxT8hVAv2SMJsyi8iSAe_wCp9Xtq2sX0N5d6zygOdcaXy&attredirects=0
10. Grinchenko S.N. About Teleological and Integralist Approaches in Theoretical Evolutional Biology // Electronic journal "Biocosmology - neo-Aristotelism". Vol.7, No.2, Spring 2017. Pp. 315–317 – https://be5669be-a-62cb3a1a-s-sites.googlegroups.com/site/biocosmologyneoaristotelism3/issues-of-the-journal-vypuski-zurnala/vol-7-no-2-spring-2017/BOOK%20OF%20ABSTRACTS.pdf?attachauth=ANoY7coJ4doZDuCouwob5uZceNlG4_HcKn8nEyPc5Yb6y6CwMFYSu6zJfJg-DFkh6Hqpk8Q-forhN9yU0Tkkr9QpYTMyLcMamM_g5eDcDC2fPDC_24fsnMrzjj16XoJ4JyGPXJj6LFA-Uat9HDkQLmU_jQTlkjVKycLmw2jR-X99X9HKMIs4pmI9C88toWg_l05P1r28MGsDqjUFFBcz2Vl_ejye7NcgrD3785BTn2imhq_TYIuN1Z3T9XUuAXHCAhTh6r67IAeBiVucFcnoNMJLJml5vBfdF48vRBfZJuRDPHLnPi4up10Sbfa3zCGaQO-PxUwC-SLXnpNQe67piW-DN_QxO1MTBg%3D%3D&attredirects=0

THE INCREASING INHOMOGENEITY OF THE POWER OF SCIENCE AND AN "ARISTOTELIAN" PROPOSAL TO COPE WITH

Walter KOFLER[1]

ВОЗРАСТАЮЩАЯ НЕОДНОРОДНОСТЬ НАУКИ И ПРЕДЛОЖЕНИЯ АРИСТОТЕЛЯ КАК СПРАВИТЬСЯ С ЭТИМ

Вальтер КОФЛЕР

Fundamental changings have taken place in the last 2-3 decades and are taking further on - with relevant influences for the eco-socio-cultural living conditions: Now there are no more discussions (e.g.): The climate change is reality and curative medicine is as powerful as never before but not sufficient enough in relevant cases. The situation in medicine can be used as indicator in which fields we can and in which we should not expect the needed scientific support: The analysis demonstrates: Health related aspects caused by physical interactions can be predicted even in the single case. This is relevant: Applications of science are related any time on special single cases - not only in medicine. But the power of sciences is reducing up to the deprivation of any causal fundament e.g. for Alzheimer. Therefore cluster method remains actually as the only related tool. Pfizer – the world biggest pharmaceutical company - skipped its research program to develop a drug against Alzheimer this year - not because of the lack of money but because of the lack of power of the used scientific theoretical frames. This should be accepted as an alarm clock for the scientific community that the borders of the power of the used paradigms are reached and a discussion about the extension of our scientific frames should be started.

Therefore an additional frame is needed. Relevant support can be expected from Aristotelian positions. One key aspect is demonstrated for the needed "Extended View": How to integrate the single case more appropriate into a frame which is compatible with the powerful state of knowledge in the different related scientific disciplines.

Keywords: power of science, Alzheimer, "Extended View", Aristotle, single case and predictability

[1] I.M. Sechenov First Moscow State Medical University, Moscow.

BIOCOSMIC UNIVERSE IN THE WHITEHEAD'S PROSPECT

Hongwei DING[1] & Kumar KHADKA[2]

БИОКОСМИЧЕСКАЯ ВСЕЛЕННАЯ В ПЕРСПЕКТИВЕ УАЙТХЕДА

Хунвэй ДИН и Кумар ХАДКА

Biocosmology is a kind of thinking mode of ecological philosophy. It is a reflection of Whitehead's process philosophy. It is a kind of constructive post-modern ecological philosophy, which faces post-modernism. Now our society have to face so many problems created by some dominated concepts of Mathematics and Physics after Industrial Revolution. The convenience of life brought by the rapid development of the economy has benefited from the progress of science and technology. The progress of science and technology has promoted a larger wave of technological innovation. Under the guidance of anthropocentrism, mathematical science dominates the discourse of the present life world. But because of the deterioration of the environment and ecology, we are constantly reminded that this development mode is unsustainable. We must rethink on this unsustainable development model. We need to rethink on the scientific superstition of contemporary society, and what we want is the sustainable development of the world. New enlightenment requires to focus on natural science. Revitalization of contemporary new natural science and natural history education. Through the natural history education can we make common understanding among the public. The process of education is long and requires us to start education from children. Use organic education, use ecological education, and use natural education. We should use natural culture to face the future group of our children and adolescents. To open their way of learning to adults.

Theoretical review. Whitehead's process of organic environmental ecology was first valued by ecological thoughts. His bio-cosmology provided a "deep ecological world view" for environmental movements. The breadth and depth of progress is revealing the ecological connections as the unity of the environment and the body's mutual tolerance generated from the creative world. The great theory needs to go out of the study and return to nature. We spread the organic philosophy of the museum education culture in the context of the museum environment of the natural sciences in order to spread the culture of natural history. In the process of disseminating natural history, the process of dissemination, the organic philosophy.

The world of natural history is a world of sustainable development. From Whitehead to Mr. Cobb, the role of education is emphasized. In their thoughts, they both criticized the shortcomings of modern education. At the same time, according to the philosophy of process, ecological philosophy, and the theory of bio-philosophy, they established their own educational ideology. Process thinkers advocate liberal arts education; advocate organic education; integrate education; advocate hot soil education, only through the path of museum education, can an ecological civilization be realized, and then the hope of ecological civilization can take root in this land. They criticized this unique goal of the contemporary educational service for economy. Because this leads to personal utilitarianism

[1] Beijing Academy of Whitehead Education Technology, Beijing, China.
[2] Beijing Normal University, Beijing, China.

and learning to be an adult, education must return to people-centeredness and aim at the well-being of the community. From the perspective of constructive postmodernism, a new educational concept has been proposed. Seeking to cultivate responsible citizens and those who can creatively solve practical problems is of great inspiration.

Whitehead is considered to be the founder of postmodern educational theory. Process education emphasizes the transformation of thinking style. We must avoid the substantive thinking and dualism of modernity and emphasize the organic integrity of things – on the generative and intrinsic links. Process education opposes excessive specialization and disciplinary differentiation, as it leads to the disparity between disciplines and the fragmentation of knowledge. Our education can only produce experts in certain narrow areas, but there are few generalists who can solve global fundamental and long-term problems. He mentioned that the defect of traditional education is that there is less connection with the material world, and the process education teacher emphasizes the ability to work, thus integrating the psychological world with the material world.

Whitehead regards education as a process of generation. Whitehead's educational rhythm theory believes that whether it is the development of a person's life or the mastery of knowledge, it is necessary to go through the three stages of romantic, precise and comprehensive application. We believe that this view may have enormous appeal and profound implications for education.

Contemporary China has entered a postmodern society and has to overcome the modern predicament of postmodern education. Whitehead’s philosophy of process education presents a good solution. He believes that the core feature of post-modern education reform is learning in the community. When students study in the community, they place competition in a secondary and cooperative position.

We will feel this organic universe and the organic world. It also has a two-sided nature. On the one hand, it is the side of the process, on the other hand, it is organic. When we conduct mathematical science research, it helps us to continue from the whole to the details. The transformation of the so-called scientific paradigm has been achieved from macro to micro. The science of science and science, through the continuous subdivision of scientific research, so that our understanding of the world is more and more refined, this is nothing wrong. As an organic whole, we know the world, understand the world, and face the world; we must have a holistic view, a systematic view and a hierarchy view. We must have a naturalistic thinking. His so-called two sides are a paradigm scientific research that gradually moves from macro to micro. On the other hand, it is based on the new organic cosmology. Ecological awareness and overall awareness, ecological theory of sustainable development. Just like the balance of the world, diverse values coexist.

The idea of process education almost subverts all aspects of modernist philosophy and the return of natural history. Or the revival of natural history, established a good and public interface. Philosophical theory cannot stop at this level of theory and must be communicated to the public through an effective way. Use a venue like the museum. Come to museum education. And this museum education is a communication venue for natural science, which can have more systematic teaching resources. Let ideas spread effectively in such places. The museum is a theater, the museum is a church, and the museum is a school. Let our public, in fact, young children and adolescents in this place, realize their natural observations, and naturally explore the fun of museum education.

Museum education advocates local knowledge education. Through the museum education, the public loves their hometown and loves the hot land of living and existence. Usually, children have a natural affinity for nature and all kinds of flowers and animals in

nature. It is almost impossible for us to find children who do not love nature and do not love animals. But people in contemporary society suffer from a natural deficiency. Because many people live in reinforced concrete urban forests from birth to growth. Although there are green trees around him, this green tree seems to have no connection with it. Therefore, our contemporary education can be said to be an anti-ecological education. Natural history education is to let people care for nature and face the current ecological crisis and social crisis. We use the education to awaken the public and care for and understand nature. The current ecological crisis and social crisis call for a new type of education that is in harmony with nature and consistent with ecological civilization, organic education and hot soil education. For hot soil education, Professor Wang Zhihe has a good generalization. Ecological civilization calls for a kind of hot soil education, which is a rooted education with the common welfare of hometown and local community. He focuses on enhancing the connection between students and the world. He cultivates the students' heavy sense of responsibility and deep sense of belonging are the purpose of education.

Process education advocates the development of creative education. Whitehead's organic philosophy places great emphasis on creativity and novelty. He believes that education is an adventure behavior. Creativity becomes the ultimate category in Whitehead's philosophy. The universe is an infinite creative process. So it is also called creation philosophy. Whitehead regards creativity as the source of social progress and the basic purpose of education. He said that a society that keeps moving forward must include three kinds of people, scholars, discoverers and inventors. The advancement of society also depends on the fact that in this society, the educated public should have both a certain level of knowledge and the ability to discover and invent.

Conclusion. Bio-cosmology has also given the world infinite possibilities for interpretation. Form a context in which multiple cultures coexist. At the same time it also brings a paradox, which is the paradox of interpretation. Since the multilingual explanation is not a single explanation, it seems that there is a freely arbitrary interpretation. And it is possible that it will be misled by interpretation. But it is precisely this open and free interpretation is an approach to decentralism and authoritarianism. So the crisis of the monism is often presented in only one kind of explanation, once the explanation error emerges, there may be crisis of absence in the mechanistic interpretation of the foundation. Just like a clock or machine, if the part is broken, the machine may not be able to run. And if a tree is partially damaged, it does not affect the growth of the tree. The phenomena that appear in nature, such as the tsunami or earthquake etc., are a kind of destruction or even a disaster to the local part of the earth. But in nature, it is just a repair or a release of some kind of power. What may be brought about is a rebirth reconstruction. From the perspective of physics, it is a phenomenon that uses mathematical science to explain and interpret this kind of disaster phenomenon and natural disaster. From the cosmological point of view, we are powerless to change this nature, but we are currently developing this predatory nature of nature under the premise of anthropocentrism. The man-made natural disaster brought by us is worthy of reflection. And such enlightenment is the second enlightenment we have to do now; and herein we can use the approaches developed by Heidegger and Whitehead, as well as the theoretical basis and guidance of Biocosmological views. We use naturalistic perspectives to guide people to re-recognize and re-think about nature. Face our nature with the feelings of the natural history. In the era when the current mathematical science education dominates the world, the organic view of the environmental view, the ecological view and the natural view of the natural history realizes the purpose of our so-called second enlightenment.

СЕВЕР/ЮГ МЕТОДОЛОГИЧЕСКИЕ ПЕРСПЕКТИВЫ В СОВРЕМЕННОЙ ЭКОЛОГИИ

Константин Станиславович ХРУЦКИЙ[1]

NORTH/SOUTH METHODOLOGICAL APPROACHES TO THE CONTEMPORARY ECOLOGY

Konstantin S. KHROUTSKI

Фрэнсис Бэкон, один из основоположников современного научного метода, в 1620 г., в своем знаменитом произведении «Новый Органон» (в котором он яростно критиковал Аристотеля и, в свою очередь – выдвигал новые, математического физикализма, основания науки) – здесь выдающийся ученый, философ и общественный деятель утверждал следующее: «Справедливо полагают, что истина – это дочь времени, а не власти. Поэтому не удивительно, что узы древности, власти и единодушия настолько сковали силы и способности человека, что он не может (как будто заколдован) усвоить для себя суть вещей как они есть»[2].

Напротив, через 300 лет, в 1930-х гг., Владимир Иванович Вернадский утверждал уже следующее: «Прошло много лет, прежде чем я понял (в середине 30-х годов) отсталость философии (в мировом ее охвате) в переживаемый нами исторический момент в жизни человечества… Она стоит в сущности на почве XVII в., не сознавая невозможности освоить новые явления “старыми мехами”…» [Вернадский, 1988, с.237][3]. В свою очередь, нельзя также не отметить существенного вывода Н.Н. Моисеева, что в процессе исследования отношений русского космизма и учения В.И. Вернадского о ноосфере (в аспекте новой науки XX-XXI вв.):

> …человек, как и в античные времена, снова становится действующим лицом, неотделимым от космоса, его частью, его составляющей. И он, человек, теперь изучает космос “изнутри”, не как наблюдатель, а как участник событий. Он изучает и свою причастность к процессам, внутри его происходящим. Это умонастроение получило название русского космизма. Оно родилось в России и является одной из важнейших страниц истории русской и мировой философской и естественнонаучной мысли» [Моисеев, 2000, с.605][4].

---

[1] Новгородский государственный университет, имени Ярослава Мудрого, Великий Новгород.

[2] В оригинале: “For truth is rightly called the daughter of time and not of authority. Therefore it is no wonder if the spell of antiquity, of authors and of consent has so shackled men’s courage that (as if bewitched) they have been unable to get close to things themselves.”; см.: Bacon, Francis (2000). *The New Organon*. Edited by Lisa Jardine and Michael Silverthorne. Cambridge: Cambridge University Press (first published 1620 as *Novum Organum*), p. 69.

[3] *См.*: Вернадский В.И. Философские книги натуралиста. М.: Наука, 1988.

[4] *См.*: Моисеев. Н.Н. Русский космизм и учение В.И. Вернадского о ноосфере. // В сб.: В.И.Вернадский: Pro et contra. СПб.,2000.

Так же и Н.Г. Холодный, другой видный русский космист, создатель концепции *антропокосмизма* (и последователь Вернадского) – особо отмечал положение человека (исследователя) «*внутри*» природы, в частности утверждая, что «человек, несмотря на существенные особенности созданной им жизненной среды, продолжает оставаться неотъемлемой частью космоса, полностью подчинённой действующим в нём законам. Человек находится не *над* природой, а *внутри* природы» [Холодный, 1993][5].

Никогда нельзя забывать и о научном вкладе русско-американского ученого Питирима Александровича Сорокина (1889–1968) и его Динамической (натуралистической сущности) теории универсальных социокультурных циклических (естественных, самоосуществляющихся) изменений. Гениальный ученый раскрыл и обосновал существование всеохватывающих (все социальные и культурные процессы в жизни общества и человека) Трех Типов социокультурных суперсистем. Эти Три Типа являются существенно внеисторическими (т.е. универсально существующими во все исторические эпохи), но могут быть рационально восприняты и оценены только с позиций Органицизма[6]. Данный Тип космологии полагает себя на основаниях Динамического натурализма, в первую очередь используя натуралистские принципы Динамизма (определяющего значения внутренних присущих потенциалов субъекта жизни к Самоизменению и Саморазвитию), Биполярности (универсального одновременного (со)существования в каждой природной живой вещи двух полюсов и полярных-противоположных сфер в своей целостной организации[7]), Цикличности и Триадичности (поочередного, на основании кругооборота, доминирования двух полярных сфер на основании срединной – базальной и аксиальной – Интегральной субстанции); как и на ведущих принципах Энтелехизма и Гилеморфизма (в соотнесении с *Органон*Космологией Аристотеля); и несомненно принципах Иерархии, Гетерогенности и Онтогенетичности (конечности) в существовании и развитии действительного природного мира (Космоса).

Сам же Питирим Сорокин, в своем выдающемся натуралистском исследовании[8] – здесь гениальный ученый обосновал реальность естественного возникновения (уже с середины XX-века) оснований для доминирования Интегрального Т_СКСС, в организации мировых социокультурных процессов. Каждый Интегральный Т_СКСС существует на собственной космологической основе, но он объединяет в целостном (гармоничном) синтезе эффективные

---

[5] *См.*: Холодный Н.Г. Мысли натуралиста о природе и человеке // Русский космизм. М., 1993.

[6] Хотя сам П.А. Сорокин и не ставил подобных (изучения оснований науки) целей в ходе реализации своего уникального – Триадологического – подхода к исследованию социокультурных явлений и процессов.

[7] «живой» – кто способен к самоизменениям и функционального содействию в организации орган(изм)а высшего (более сложного) уровня организации.

[8] И на основании его основополагающего понятия **Т**ипа **с**оцио**к**ультурной **с**упер**с**истемы (Т_СКСС) и краеугольного принципа универсального существования и Динамического взаимодействия Трех универсальных (всеохватывающих) Динамических Типов мирового социокультурного устройства и развития – Идеационального, Чувственного и Интегрального.

средства, принадлежащие двум другим (полярным) Т_СКСС: Чувственному и Идеациональному[9]. Во всем этом, краеугольный момент состоит в том, что Питирим Сорокин выявил Триадологическую (динамическую и циклическую) сущность социокультурной реальности, таким образом раскрыв «супер-ритм Идеациональной-Идеалистической[10]-Чувственной ступеней развития»[11] в разные исторические эпохи» [Sorokin, 2010, p. 676]. В конечном итоге, ученый обосновал прогноз, что «новая – *более интегралистическая* – суперсистема культуры и благородного общества, будет выстроена не на увядшем Чувственном корне, а на жизнеспособном и более могучем корне интегралистического принципа» [Sorokin, 2010, p. 702][12].

В целом, натурализм и натуралист – это существенное и обязательное понятие и категория научных исследований, в реализации процесса получения достоверных необходимых научных знаний[13]. В этом отношении, будет полезным услышать проницательное суждение В.В. Зеньковского (автора, по мнению ряда специалистов – «лучшей истории русской философии»), в отношение к достижениям Ивана Михайловича Сеченова (1829–1905), признаваемого «отцом русской физиологии»:

> Его (Сеченова. – К.Х.) основное убеждение заключалось вовсе не в материалистическом истолковании психики, а в отрицании самостоятельности духовных процессов»: 2) «Сеченов чрезвычайный противник психологии, строящейся из одних данных сознания – в этом ключ к критике у Сеченова современной ему психологии. Это не материализм, а чисто натуралистический подход к изучению психики, т.е. отрицание так называемой «чистой психологии». Ничего другого в работах Сеченова, если их изучать без предубеждения, нет; поэтому надо признать, что для причисления его к материалистам нет оснований [Зеньковский 1991, Т. 2. Ч. 2, с. 35][14].

---

[9] Подробнее об этом, см.: Хруцкий К.С. Перечитывая «Ответ моим критикам» П.А. Сорокина: К вопросу о реабилитации Триадологического метода в динамической циклической теории великого ученого // Biocosmology – neo-Aristotelism, Vol.5, No.3&4 (Summer/Autumn 2015), с. 378–413.

[10] Термин «идеалистический» является синонимом для «Интегральный» в циклической теории социокультурного Супер-ритма в жизни любого общества и культуры.

[11] В оригинале: “the super-rhythm of Ideational-Idealistic-Sensate phases” in the various historical eras,” [Sorokin, 2010, p.676].

[12] В оригинале: “*a new – **more integralistic** – supersystem of culture and noble society built not upon the withered Sensate root but upon a healthier and more vigorous root of integralistic principle*.” [Sorokin, 2010, p.702]; цит. по: Sorokin, Pitirim A. (2010). Social and Cultural Dynamics: A Study of Change in Major Systems of Art, Truth, Ethics, Law, and Social Relationships. 4 vols. 1937 (vols. 1-3), 1941 (vol. 4); rev. 1957 (Fourth printing 2010), Transaction Publishers, New Brunswick, New Jersey.

[13] Подробнее, см.: Хруцкий К.С. Восстановление культурно-генетического кода российской цивилизации: Биокосмологические перспективы // Biocosmology – neo-Aristotelism, Vol.6, No.2 (Spring 2016), с. 324–369.

[14] *См.*: Зеньковский В.В. История русской философии в 2-х тт. Л.: «Эго», 1991.

Не случайно, что и В.И. Вернадского признают во всем мире как выдающегося натуралиста, тем самым отличая его достижения от повсеместно доминирующей (или скорее диктующей свои правила) эмпирической позитивистской науки. Так, Жак Гриневальд, во введении к англоязычной книге «Биосфера» Вернадского [1997], озаглавленном как «Невидимость Вернадскианской революции» пишет[15]:

> Открытие «живого организма биосферы» (что раскрывается в главе 13, его «Биосферы»,) возникло из многих научных традиций и инноваций, объединенных энциклопедическим умом Вернадского, геолога и натуралиста в самом широком смысле этих терминов [с.27].

Здесь же, однако, выдающийся ученый добавляет, с сожалением:

> Научная информированность, обнародованная Вернадским и некоторыми другими забытыми натуралистами, тем не менее не была принята основной наукой, и, до сих пор, не является «глобальной проблемой» национальной политики или международных отношений [ibid.].

В свою очередь, опубликованный в 2018 г. «Доклад Римскому клубу»[16], с его результирующим выводом (о необходимости) и требованием немедленного производства «Новой Философии» и срочной реализации эпохи «Нового Просвещения» – можно рассматривать как показательный (демонстрирующий «дух времени») документ. Другими словами, «Доклад» отражает понимание, в современном глобальном культурном развитии, назревшей задачи по осуществлению фундаментальных изменений, заключающихся в выдвижении новых оснований культуры и науки, и таким образом реализации т.н. «тектонических сдвигов глобальной трансформации» в мировой социокультурной жизни. В этих условиях особое значение приобретает, и нам следует обратить самое пристальное внимание – на важную инициативу современной Китайской культуры, официально объявленный с 2016 г. стратегический курс Китайского общества на решение глобальных задач – Построение Сообщества Общего Будущего и Единой Судьбы для всего Человечества (Building a Community of Shared Future and Common Destiny for Mankind)[17].

---

[15] *См.*: Grinevald, Jacques. *Introduction: The Invisibility of the Vernadskian Revolution*. In: Vernadsky VI (Ed.). *The Biosphere*, New York: A Peter N. Nevraumont Books; 1998, pp. 20–32.

[16] *См.*: Ernst Ulrich von Weizsäcker & Anders Wijkman. (2018). *Come On! Capitalism, Short-termism, Population and the Destruction of the Planet. A Report to the Club of Rome* (by Ernst von Weizsäcker and Anders Wijkman, co-authors in cooperation with 34 more Members of the Club of Rome; prepared for the Club of Rome's 50th Anniversary in 2018). Springer, Science+Business Media LLC, 2018.

[17] Подробнее об этом, см.: Хруцкий К.С. Новый Ноократический интегральный рационализм, как основание к построению «Сообщества единой судьбы человечества // *Biocosmology – neo-Aristotelism*, Vol.8, No.1 (Winter 2018), p. 148–194.

Трудно переоценить значение данной Китайской (всемирной) Инициативы для всего человечества, в плане развития его безопасного благополучного будущего. На самом деле, за последние тысячелетия мировой истории – мы впервые получаем возможность осуществления действительно мирной (peaceful, вне обязательного применения приемов агрессии и военного подавления, с последующим насаждением тех или иных «единственно правильных» порядков) – действительного построения Мира (Peace). Естественно, что современная Китайская – великая – культурная Инициатива и Стратегия должны естественным образом найти всемерную поддержку среди всех здравомыслящих деятелей культуры во всем мире.

Тем не менее, пока что, удивительным образом – реакция Российского культурного сообщества на Китайские (действительно миролюбивые) усилия по строительству мира Общего Будущего и Единой Судьбы – данная реакция в лучшем случае может быть охарактеризована как сдержанная и настороженная. Это удивительный момент, поскольку русские культурные потенциалы исконно характеризуются как миролюбивые и устремленные к построению целостного настоящего и всеобщего Ноосферного эко-гармоничного будущего (где особенно заметен научный вклад В.И. Вернадского). Как бы то ни было, но вновь подчеркнем – пока реакцию научного сообщества и России, и Западных стран характеризует оторопь (мягко выражаясь), если не подозрительность и отторжение.

Невольно создается впечатление, что все западно-мыслящие деятели культуры (и науки) так привыкли (в Западной культурной доминирующей среде последних столетий) противостоять окружающему миру и друг другу, и поэтому постоянно воевать за обретение доминирующих позиций – что в результате утеряли способность мыслить разумно, включая и возможности (неотложно востребованные на сегодня) действовать в миролюбивом (естественном для *Homo sapiens*) ключе. Безусловно, что подобное отношение является абсолютно недопустимым; и что на самом деле пришло историческое время для выдвижения и реализации новых миролюбивых – Органицистских и Интегралистских – оснований науки и культурной жизни. В любом случае, в свете вышесказанного, ученые всего мира не могут не поддержать действительно мирную – реального миростроительства (peacebuilding), и реализуемую впервые за последние тысячелетия – великую Инициативу Китайской культуры.

Именно в этом стратегическом направлении, автор предлагаемого доклада выдвигает (и обосновывает решение) своих исследовательских задач, в первую очередь фокусируя внимание на необходимости развития научных (космологических) понятий Север/Юг – как космологических оснований в науке XXI века, включая здесь и их значение как методологических перспектив для современной экологии. В этом подходе, с необходимостью высвечивается уникальный – Органицистский – потенциал Российской науки, что имеет для нашей культурной эпохи существенное значение. Здесь важное значение придается феномену опережающего развития российских Органицистских (Динамического натурализма) научных достижений. В докладе особое внимание уделяется выдающимся научным вкладам Н.Я. Данилевского, А.А. Ухтомского,

П.А. Сорокина, Н.П. Брусенцова[18], АД. Ноздрачева, и, конечно же – В.И. Вернадского, с его «геохимией живой материи» и фундаментальными космологическими концепциями биосферы и ноосферы[19]. Особое место в докладе отводится сравнительному анализу Русской и Западной научных парадигм в современной экологии и эволюционной биологии. Также главное внимание уделяется характеристике Восточных (Таоистских) представлениям о происхождении и существовании (жизни) физического (космического) мира.

В завершение доклада осуществляется, с позиций Динамического натурализма – характеристика выдвигаемых научных понятий Север/Юг, которые насколько Биполярны (противоположны друг другу по космологическому значению), настолько же вездесущи и всегда (со)существующие в своем Органицистском единстве. В то же время, как утверждается в докладе – «все пути ведут на Север», тем самым выражая Динамическую, Биполярную и Циклическую – Биоритмическую (Триадическую, Четырехстороннюю и Пятивалентную) сущность ренального (Ноократического) мира[20]. Доклад также подытоживает, что «новое – это хорошо забытое старое»; и что в текущее время естественным образом и объективно на первый план – равным образом, и в отношении экологических устремлений – выходят именно основания культурологической и научной деятельности, которые субстанциально имеют именно Органицистские и Интегралистские (существенно Натуралистские) основания (что, собственно, и есть главный вывод из динамической циклической теории Питирима Сорокина). Естественно, что первоочередная задача ученых и культурных деятелей современности, включая экологическую активность – непосредственно заключается в полноценной реализации данной естественной (Органицистской) Динамики мирового развития.

---

[18] *См.*: Кудрин В.Б. и Хруцкий К.С. (2017). Трехзначная логика и троичная информатика Н.П. Брусенцова: их Аристотелевские основания // Biocosmology – neo-Aristotelism, Vol.7, Nos3&4 (Summer/Autumn 2017), p. 337–388.

[19] *См.*: Vernadsky, Vladimir I. (1999). The Biosphere and the Noosphere. In: *The Biosphere and Noosphere reader : global environment, society and change* / edited by Paul R. Samson and David Pitt. London ; New York : Routledge. Pp. 96–100; а также, анализ этих вопросов, в статье: Khroutski, K.S. & Klimek, R. (2018). Biocosmological definition of Information and its Naturalist causative significance, approaching to evolve the World Information University (WIU) // *Biocosmology – neo-Aristotelism* Vol. 8, No. 2, (Spring 2018); pp. 203–261.

[20] Подробнее, см.: Хруцкий К.С. Новый Ноократический интегральный рационализм, как основание к построению «Сообщества единой судьбы человечества // Biocosmology – neo-Aristotelism, Vol.8, No.1 (Winter 2018), pp. 148–194.

THE DEVELOPMENT OF ARAB MEDICINE IN THE EARLY MODERN TIMES AND ITS SIGNIFICANCE

Runhu LI[1]

РАЗВИТИЕ АРАБСКОЙ МЕДИЦИНЫ В ЭПОХУ РАННЕГО НОВОГО ВРЕМЕНИ И ЕЕ ЗНАЧЕНИЕ

Жуньху ЛИ

Since 610, the Prophet Muhammad (Muhammad, 570–632) began to receive the revelation of the Holy Quran through the "Gabriel" of the "Allah" under a series of "prophecies" and "inspirations". Later, the Arabs began to contact and believe in Islam. By the time of his death on June 8, 632, almost all Arabs had become believers in Islam. With the rise of Islam, the Arabs established a Spanish region in the west for the next two hundred years, from the east to the Chinese border and the Indus, across the Asian, African and European continents empire.

Most medical history books often refer to the medical history of the 7th to 17th centuries as "Arabic Medicine", "Islamic Medicine" or "Muslim Medicine". These different titles actually tell the same paragraph of medicine. History, the author believes that the influence of Islamic medicine on the Arabs and the empire under their rule is in fact not in sync with the rapid rise of Islam and the Arab Empire. Therefore, these above are not wrong, but they are not accurate. After a large number of investigations and studies on the medical records of this historical period in Chinese and English, the author believes that it is most appropriate to divide the medical history of this period into the following three periods:

1、 Arab medical period (from the 7th to the 9th century)

2、 Greece – Islamic Medicine (10th to early 12th century)

3、 Islamic medical period (12th to 17th century)

[1] The Institute for the History of Nature, Chinese Academy of Sciences, Beijing, China.

CHINESE TEA ART AND HEALTH CULTURE

ZiXin DONG[1]

КИТАЙСКОЕ ИСКУССТВО ЧАЯ И КУЛЬТУРА ЗДОРОВЬЯ

Цзысинь ДУН

Food is the bond that connects human beings with nature. Food not only enables human beings to *persevere*, but also during the course of a long human history helps to form a splendid food culture. Moreover Chinese tea art seen as a peak of the food culture, with beautiful artistic expression and magical health effect has been deeply appreciated by the population and has been able to spread extensively throughout the world creating a unique health culture and has also become an indispensable national etiquette for Chinese national leaders in receiving foreign guests.

The Chinese health culture, with Taoism as its origin is centred in worshiping of heaven and earth, beginning with the needs of human beings and with a purpose of healthy body and mind formed to become a profound health culture. Moreover Chinese tea art is one of the many outstanding *segment* of the tremendous Chinese health culture which is perceived with love by entire population of the world, regardless of their nationality, ethnicity, religion and so on. There would rarely be anyone who would reject or dislike such a unique culture. Again the utilities like silk and ceramic utensils in the Chinese tea art have also become a cultural symbol of healthy life for people around the world, adding to the popularity of Chinese tea art. China (ceramic) has even become a representation of China to the world. *Since the Chinese tea culture has travelled thousands of miles into the world, historically Silk Road has also become a beautiful landscape of cultural exchange between China and the world*. A very important reason for Chinese tea art receiving such a warm reception throughout the world is its good health benefits.

The four major element of tea art is: *landscape, view, tea and making friends*. That is to appreciate the tea utensils bearing an artistic beauty in a beautiful ambience, to feel the beauty of the nature through tea, and to adjust the mind and body to an optimal state of harmony, drinking tea during interaction could bring peace and delight to the body and mind.

The difference between *health and nutrition* lies in adjusting the human body with nature, during the course of life adjust the body and mind to an ideal state with ways of interaction between people to people and to be able to live a life full of health, grace and romance, or in other words to be able to live a life with a poetic flavor. Tea, as a mystical existence in nature, has an indisputable magical effect in

[1] Beijing Normal University, Beijing, CHINA.

regulating the human digestive system, nervous system and immune system, and is also capable of adjusting human physiology and psychology to an optimal state. In China, due to the influence of nature, geography and climate, the biological external forms and contents of tea grown in different places are different. In the Tang Dynasty Lu Yu's "Tea Classics", "The Source of Tea" has clearly stated, such as "*In the purple forest of Yangyin and yin forest purple*, 阴山坡谷性凝滞，结痂疾 等". Moreover, under the influence of geographical environment, the tea art in different parts of China has become a self-contained system. *Over the course of thousands of years of history and experience, cumulatively formed a tea art regimen suitable to local livelihood and customs which is represented by a system of special techniques of making six different major types of tea. The main objective: select the suitable. The standard for all tea art is one: suitable to the health of the people as the beginning*.

Chinese tea art uses tea as a performance art to achieve harmony between people and people, people and nature, people and their hearts. It is a sublimation of life into art to achieve a perfect state of body and mind. Tea art is not a cure for health, but the health. Tea and health, tea is not only a material provision, but also a spirit product like tobacco and alcohol. As tobacco and alcohol as well as tea is not separately referred into to the spiritual facet. When it comes to tea, most people pay attention to the role of tea in the human digestive system, at the same time ignoring the role of tea in the human nervous system, the immune system, and of course the meridians. The communication between tea and the human body is all-round, such as acupuncture, through the stimulation of the body, causing the body, including the brain, to produce special substances to achieve anesthetic effects. The mechanism of tea regulation on the human body's motor circulation system is still unknown to us. The classification of Chinese tea production is actually aimed at adjusting the organic movement state of the human body to achieve the purpose. *The so-called one tea party raises one person, and the museum view survey* found that tea production methods are closely related to local eating habits and climatic conditions. Various literary works and related literatures circulating in various periods in Chinese history can provide the glimpse of the role of tea in human nervous system. *Tea has been the most effective natural care for human beings after their movement from the forest to a place with different external conditions than that from a forest.* The tea can not only cure the disease, but is also an important choice to maintain a good health. In China, the teaching of tea culture is given more spiritual consideration, and the role of tea and the human body is considered systematic and organic.

THE FRAMEWORK OF *CONTRIBUTIONS TO PHILOSOPHY*

Yan BAO[1]

КОНЦЕПТУАЛЬНАЯ СХЕМА *ВКЛАДОВ В ФИЛОСОФИЮ*

Янь БАО

The Framework of Heidegger's Contributions to Philosophy. Heidegger divides Contributions to Philosophy (from the original) into eight parts. With the exception of the beginning of "Vorblick" and the end of "Seyn", the middle six parts are called "joints" (Fuge) by Heidegger: "Echo" – "Transfer" – "Jump" – "Foundation" – "Future" – "The Last Gods". The section beginning with age 429 and ending with page 434, contains Heidegger's discussion about the last gods.

The Interpretation of the Last Gods. Heidegger's Gods is last. It is last because immediately, and requires long preparation. The last one "needs the longest fore-runner". This "fore-runner" means preparation for thought and survival. This preparation includes both the deconstruction of the old gods and the guidance of the new gods.

1. The Deconstruction of the Old Gods. Heidegger found that there is a deep-rooted mistake in traditional metaphysical theology. It is impossible to eliminate this kind of mistake through the criticism of some isolated details. It cannot satisfy the problem of Gods through the repair of bits and pieces. Therefore, one thoroughly deconstruct traditional theology, and completely remove all its remnants. In Being and Time, Heidegger sets out his most systematic and critical deconstruction of traditional Christian theology.

We must face up to the existence of the whole person. We habitually regard the whole person as a unity of body, soul and spirit. And "body", "soul" and "spirit" can respectively indicate the field of phenomena that are tied to a particular subject of exploration. The indeterminate quality of its ontology may be irrelevant to a certain extent. But when we want to discuss the problem of human existence, we can't simply put together the undefined existence of the body, the soul and the spirit. And even when we try such an ontological procedure, we have presupposed some kind of holistic concept of existence.

Heidegger tries to consider the possibility of true theology from the theory of existence and ontology. Starting from the theory of existence, as well as from a kind of reconstructed basic principle of ontology, which deconstructed in a conceptual way. In "phenomenology and theology", Heidegger explicitly opposes the practice of reducing Christianity to a universal principle or innate value, and emphasizes witnessing the historic gods through the crucified Christ and historical revelation, and he reveals the nature of theological non-objective thinking in the appendix. After the period of Being and Time, through the interpretation of Nietzsche, the experience of "the death of Gods" entered Heidegger's own thoughts. This further promotes the deconstruction of traditional Christian theology. For Heidegger, "the death of Gods" is not the death of himself, but the death of Gods in traditional theology as the ultimate value. And only

[1] Liupanshui Vocational Technical Institute, Liupanshui City, CHINA.

through the death of this metaphysical Gods, it can freely lead to the true Gods — the Gods of the divine from the divine.

2**. Guide to the New Gods**. The guide to the new Gods is essentially to direct people towards the "being-in (the divine)", so that people truly become "this-in". Only the foundation of "this-in" and the preparation for stepping into the truth of being can open up a completely different time-space. For this preparation of Gods, everything so far, such as "worship" and "church" cannot be truly prepared. They are not good for the collision of the gods who are on the way of being-in, and all creation must be presented as another beginning. For this kind of preparation for Gods, the nation and the state are too small to be delivered too much to schemes, and only in great and hidden individual can create a quiet place for gods

The preparation for the "last Gods" should be the longest, but the arrival of the "last g" is gods transient, because the "last gods" is a "non-stopper." It is just the passing gods. He has his own existence in the hits and in the hidden transformations of the gods arrival, and in the suddenness and absence of the gods escape. Therefore, "the last gods is the beginning of the longest history in its shortest orbit." Its arrival or passing is just a great historic moment. This historic moment is also the beginning of the turning point: in this instant, the truth of existence comes to the existence of truth. Gods overpowers people and transcends gods, and man and gods are coexisting in the origin of being-in truth. This moment cannot be calculated, nor a superficial "goal", before which there will be a long, repeated and much hidden history.

With the questioning of existential problems and the overcoming of being-in questions to the existent problems and the whole metaphysics, "the torch has been ignited, and the initial run has been made for the long run." However, this kind of long run is not toward the front, but a runner in the back. The later runner, the more powerful "pioneer", begins more primitively than the ones who run ahead; The later runner begins more from the beginning than the previous one, and requires more simple, rich, unconditional and unique thinking about the unity and identity that needs to be pursued. Therefore, they hold the torch, and what they accept is definitely not something that can be said to be "study" or "system", but rather is the mission (das Gemubte). This mission only opens itself to those who are rooted in the abyss of origin and belong to the enforced. People who force a person is an incalculable, natural origin or being-in truth. The person who belongs to the forced is the blessed person, and who dares to belong to the unprayable being-in and who listens the loneliness to start the conversation. The last Gods summons such a person, and the last Gods passes by to summon such a person. (This paragraph is very similar to Sophie's devotion: it only points to an end, one belonging to that end shall attain to a state which is without any guidance or description, without any procedure, but only for the call of gods.)

The "last gods" doesn't mean stopping, finishing and ending. The Terminator only exists where the existent tears away from the existence of the truth and denies any questioning. The Terminator always considers himself to be the human of completeness, and therefore does not need to be prepared to wait for the last and experience the last. Going back to "the last" of the beginning, if we use calculation thought here, and only consider "the last" as a termination and an end, rather than treating it as the extreme and most concise decision about the Most High/supreme being. Then, all the knowledge about the last gods is impossible. The last is not only the end, but rather the beginning of

history. It is "the deepest beginning, the most widely stretched, and the most difficult to be overtaken." The reason why it is the "deepest beginning" is that it opens another history while changing and ending Western history, and likewise, it is another beginning. This beginning is the beginning in which the truth of existence really emerges. The "last gods"' gathers the other gods into the ultimate and supreme essence of its divinity, and reveals the divine who exists as the source in its own flash. Since Gods has not been revealed since the first beginning, the source that was supposed to be closest to the human being has become the farthest (The Christian God is dead), and the "last gods" can reveal Gods through the call of divinity, so it "reaches the furthest and accomplishes the greatest difficulty."

For this reason, the passing of the "last gods" requires this-in preparing the place for it, and people must overcome themselves to become this-in, as well as become the founder, and enter the decisive time and space of the gods flight and arrival. That is to say, the person who is the founder must regard the object as a place of being-in and a place where gods pass. But can people do this? Can people respond to the call of signs? Can you control the coming and passing of the gods? Does *this-in* and the transition into history? All of these determine the future of man. Here, what one needs to do is not to make atonement, nor to suppress oneself, but to let the most original thing of one's own into being-in, and belong to the being-in through gods. In essence, people and other beings are not preventing gods's passing, but letting gods pass through their own most original simplicity and experiencing gods's passing. Therefore, all beings, no matter how they are placed in the computational rules of gods and man, are only entering and standing in the origin. In this kind of entering and standing, the places where the "last gods" passed and the places where people guarded are seeking to consolidate, in order to continue to prepare for the origin, instead of blocking the being-in of what the present beings must do in the truth to date.

Whether the last Gods speak to man and how speak is never proclaimed by man. Its manifestation can only be instantaneous and "prayed" out. The words we can try to say can only be instantaneous and "prayerful". It can't come from the first beginning, but only from another beginning. "This kind of speech is neither description nor explanation, neither propaganda nor teaching. This kind of speech is not opposite to the person being told. It is rather to say that this kind of speech itself – the 'Speaker' who is shaken by the essence of the being-in.

How can the true gods "pray" out? This specific "prayer" can only be a specific religious act or a specific theological problem. It is suggested in mysticism that gods is far beyond our conceptual categories. Instead of calling gods positively, it is better to call it as divine "nothing", for gods is not a super-being but an unconditional open state or empty state that constitutes everything manifest in it. Heidegger's "nothing" also shows that the obscured source of the endlessness of giving and sheltering, becoming a dependency for the world and the uncovering of truth, and becoming the "last gods" manifest itself in the truth beyond man's control.

Conclusion. As a philosopher, Heidegger is still mainly devoted to thinking about the possibility of a new gods and a new theology. He did not give specific religious guidance or discuss the specific problems of new theology. What he said is mainly to experience the "last gods" from the origin itself and in the origin itself, and mainly to explain the temporal and historical issues of the last gods.

ЭНТЕЛЕХИАЛЬНЫЕ ПОЛОЖЕНИЯ АРИСТОТЕЛЯ ДЛЯ ОБОСНОВАНИЯ ПЕРИОДИЧЕСКИХ ЭВОЛЮЦИОННЫХ ПРОЦЕССОВ В ИСТОРИИ – ПРЕИМУЩЕСТВЕННО НОВЕЙШЕЙ

Виталий Григорьевич ШОЛОХОВ [1]

ARISTOTLE'S PROVISIONS ON ENTELECHY FOR SUBSTANTIATING PERIODIC EVOLUTIONARY PROCESSES IN RECENT HISTORY

Vitaly G. SHOLOKHOV

Ключевые слова: холизм – единое и бытие, онтология возможности и действительности, энтелехия, жизнь, пространства (части) души, эволюция, силлогизм, коммуникация, знание и созерцательная деятельность

Интегралистский взгляд Аристотеля на единое и бытие. Теория «Энтелехии» рассматривается Аристотелем в рамках раздела его философской онтологии: «Возможность и действительность». Возможность это способность бытия изменяться и производить изменения. А действительность включает движение незавершенное, которое изучает физика, и завершенное в рамках теории «энтелехии (греч. εντελέχεια)». Причем, действительное предшествует возможному: 1) по определению (по смыслу, λόγος), 2) во времени, 3) по существу (по субстанции). «Душа – энтелехия тела»[2] Аристотель. Душа подразделяется на растительную, животную и Ум - человеческую (Аристотель, “*О душе*”).

Метод изложения. Мы используем формальную логику Аристотеля, которая известна по формулировке: «силлогизм как импликация». Пример силлогизма Аристотеля: Если А присуще всякому Б, И Б присуще всякому С, То А присуще всякому С[3].

Например, в теории «О душе» Аристотель определяет Душу: Душа есть энтелехия тела: здесь А – Душа, Б – Тело, Телу присущи каждая из его частей. Здесь С – часть тела. Пусть С – растительная часть тела. Тогда: Душа (растительная) есть энтелехия растительной части тела. На современном языке можно сказать, что энтелехия есть алгоритм функционирования систем /

---

[1] Независимый исследователь, Денвер, Колорадо, США.

[2] “Материя есть потенция, а форма – энтелехия”. – Аристотель, “*О душе*”, 414a16.

[3] Аристотель. *Метафизика* / Перевод А.В.Кубицкого. М Л. 1934. «Мы узнаем фигуру, – говорит он (Аристотеля), – по положению среднего термина». Цель силлогизма – обосновать отношение А к В. Для этого необходимо найти нечто общее как для А, так и для В.

подсистем. Значит, энтелехия есть идеальное понятие. Но она присуща любым формам жизни и дает основание для классификации форм жизни.

Моделью растительной души оказывается лес. Классификация лесов: одна порода, две породы, много пород. В эволюции жизни все виды и роды живого прошли «растительную» стадию. Значит свойства леса – пример «растительности» должны быть присущи всему живому. Рассмотрим, для примера широко распространенный вид лесов Земли, состоящий из пород: Ель и Береза. Эти породы находятся в состоянии естественной конкуренции за пространство и ресурсы их обитания. Наука имеет соответствующую ветвь, которая экспериментально изучает отмеченную конкуренцию. Каждая смена породы происходит через 72 года. Мы имеем пример периодической эволюции! Данные рассуждения приведена с опорой на данные из монографии А.Г. Шолохова с его согласия[4].

Как было показано выше то, что присуще растительной душе, присуще также Душе, возникшей на этой основе в дальнейшей эволюции. Мы утверждаем, что найденная закономерность проявляется в жизни современного общества, хотя на нее могут оказывать влияние все остальные составляющие тела и, значит, частей души. Животная часть души, обладающая потребностями, предопределила процессы научно-технической эволюции. В душе человека существует также высшая часть – ум. Она предопределяет формы государства и методы политии. Именно на Ум человека действуют средства массовой информации в соответствие с целями правящих партий / религиозных организаций. И эти цели могут быть опасными для судеб Человечества.

Заключение. Использование понятия Энтелехии в формулировке, данной Аристотелем, позволило нам найти условия существования периодической социальной эволюции и причины влияния более высоких частей Души.

[4] Шолохов А.Г. От закона мерностей к закону роста леса. Пушкино, 2000, стр. 134-135.

ANCIENT CHINESE "*TIANXIA*" POLITICAL PHILOSOPHY – A BIOCOSMOLOGICAL WORLD DESIGNED THROUGH "*SHANGSHU*尚书, GREAT PLAN洪范"

Kumar KHADKA[1]

ДРЕВНЕКИТАЙСКАЯ ПОЛИТИЧЕСКАЯ ФИЛОСОФИЯ «ТЯНЬШИ» – БИОКОСМОЛОГИЧЕСКИЙ МИР, РАЗРАБОТАННЫЙ ЧЕРЕЗ «ШАНШУ» 尚书, «ВЕЛИКИЙ ПЛАН» 洪范

Кумар ХАДКА

The book of documents is one of oldest text in China, which records the history of *Yao* 尧*Shun*舜 *Yu*禹 and *Xia*夏 *Shang*商 *Zhou*周dynasties. The book of documents is combined of *Yuxiashu* 虞夏书, *Xiashu* 夏书, *Shangshu*商书and *Zhoushu* 周书 four books, which are in historical Sequential order. The "Great Plan" is a chapter of *Zhoushu* 周书, which is specially focused on political theory to rule *Tianxia* (world). The state officer of late Shang Jizi 箕子 explains political principles in nine parts; five elements (五行), respectfully use five matters (敬用五事), Actively use eight kinds of officers (农用八政), respectively use five kinds of time measures (协用五纪), establish the rule of the supremacy of the emperor (建用皇极), choose officers by three kinds of character (乂用三德), clear examine doubts (明用稽疑), often consider all kinds of indications (念用庶征), encourage to use five blessing & punishments and use six penalties (向用五福, 威用六极) respectively. Here, I discuss three important political theories of "Great Plan"; firstly, the theory of the "Heaven's Mandate (天命)",the theory of interaction between heaven and mankind (天人感应论), secondly, and thirdly, the theory of Dominion (统治权).

According to Great plan Heaven (天) protects the people and makes them live in harmony with each other. The government rules the Tianxia by following the nine principles established by the Heaven described on Great Plan. There is triangular relation between Heaven, government, and people. Government has Heaven's

[1] Beijing Normal University, Beijing, CHINA.

Mandate to rule Tianxia, simultaneously peoples are protected by Heaven. It implies that the Heaven's Mandate to government is to protect people or to protected people's will or serve people, in other words Heaven's will is people's will. So, the government has to follow the principle of what Heaven saw was seen by our people, what Heaven heard was heard by our people. The Heaven mandate is not permanent, if a person's virtue is sufficient to ensure peace and contentment for the people, Heaven will give its mandate to him to govern, but if the vice of a serving ruler is sufficient to seriously harm the people, Heaven will take away the mandate from him.

In political practice government follow the principles of Heaven to rules Tianxia, where it has eternal harmony between heaven, nature, and people. The natural order of the Five elements and the social and political order of mankind follow the order of the Heavens. If government or people indiscriminate five elements order, it will disrupt the harmony between Heaven, nature, and people.

Great plan argues to establish the rule of the supremacy of the empire or king (Huangji 皇极), namely "hierarchical society of monarchy under the family-based standard" to rule the highest level within a jurisdiction. To establish the rule of the supremacy of the empire, Heaven's mandate is not enough. Heaven's mandate is an authority to rule Tianxia according to people's will, but the supremacy of the empire can follow his own will. We already know that, if the vice of a serving ruler is sufficient to seriously harm the people, Heaven will take away the mandate from him. So, there is only one possibility on the supremacy of the empire, where willing of the supremacy of the empire and willing of people is almost same. It implies that willing of Heaven, willing of the supremacy of the empire and willing of people is same, which is core idea of Great Plan political philosophy.

ГАРМОНИЯ РАЗВИТИЯ СИСТЕМЫ ЧЕЛОВЕЧЕСТВА В АРХЕОЛОГИЧЕСКУЮ ЭПОХУ

Юлия Леонидовна ЩАПОВА[1],
Сергей Николаевич ГРИНЧЕНКО[2]

Ключевые слова: гармония, "золотое сечение", археологическая эпоха, числовое моделирование, самоуправляющаяся система Человечества

1. Человечеству как системе, образуемой совокупностью последовательно возникающих иерархических подсистем [Гринченко, 2007, 2014; Grinchenko, 2006, 2011], в археологическую эпоху присущи пять свойств, три общепризнанных: саморазвитие, саморегуляция или самоуправление, самосохранение, к которым добавлены ещё два: самовозникновение («эмергенция») и саморазрушение (инволюция, деволюция, диссипация, диссимиляция и др., т.е. утрата подсистемой своих специфических свойств) [Щапова, 2011].

2. Эти системные свойства формализованы как информатико-кибернетическая модель (ИКМ) личностно-производственно-социальной (самоуправляющейся) системы Человечества, которая представляет собой совокупность иерархических контуров поисковой оптимизации целевых критериев энергетического характера. Этот механизм в целом фактически реализует Аристотелевский принцип causa finalis. С помощью ИКМ (при знаменателе числового ряда Жирмунского-Кузьмина [1982] $e^e = 15{,}15...$) рассчитаны типовые пространственные и временные параметры иерархической системы Человечества в целом и её подсистем, и также временной тренд возникновения создаваемых и используемых человеком информационных технологий, всё более и более усложняющихся.

3. Объединение этой модели (рис. 1) с «Фибоначчиевой» моделью хронологии и периодизации археологической эпохи [Щапова, 2000] позволило установить, что тренд усложнения цивилизационных параметров Человечества и его составляющих подчиняется обратному ряду Фибоначчи – дискретному варианту числового ряда со знаменателем «золотого сечения» $\varphi = 0{,}618...$. Последнее однозначно свидетельствует о гармоничном характере этого процесса [Гринченко, Щапова, 2010, 2014; Щапова, Гринченко, 2017; Grinchenko, Shchapova, 2010, 2017].

4. Идея гармонии окружающего нас мира уходит вглубь исторической памяти человечества. Со времён Фибоначчи (XII в.) и Кеплера (XVII в.) идея гармонии находит своё алгебраическое воплощение в форме числовых рядов

[1] Московский государственный университет имени М.В. Ломоносова, Москва.
[2] Институт проблем информатики Федерального исследовательского центра «Информатика и управление» РАН, Москва.

«золотого сечения» и, следовательно – его дискретного варианта, ряда Фибоначчи.

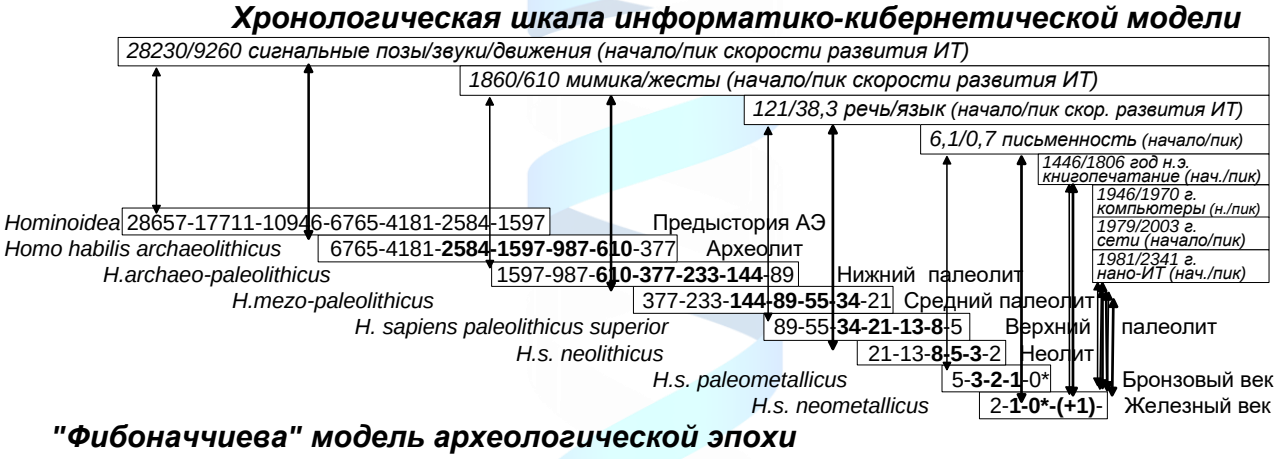


Рис. 1. Схема объединённой модели хронологии и периодизации археологической эпохи. Примечание: а) даты указаны в тысячелетиях до н.э.; б) явные фазы археологических субэпох показаны полужирным шрифтом; в) символом 0 обозначен момент смены эр («до н.э.» и «н.э.»).*

5. Применяемое нами числовое моделирование показало также, что в археологическом времени увеличиваются и характерные пространственные размеры ареалов (радиусов кругов той же площади) эффективно самоуправляющихся сообществ/социумов различной величины. Подчеркнём, что все модельные расчётные даты и линейные размеры являются реперными и ориентировочными,

6. Выбор ряда Фибоначчи в качестве основы хронологии и периодизации археологической эпохи, а также пространственных реперов иерархии системы Человечества, эквивалентен утверждению о гармоничности развития Человечества в археологическую эпоху – как фрагмент развития Мироздания, адекватного его глубинной сущности.

7. Таким образом, следует признать, что с позиций мультидисциплинарной археологии системная филогения современного глобального мироустройства выглядит не произвольной и случайной, а, напротив, исторически обусловленной фундаментальными законами Мироздания [Гринченко, Щапова, 2016; Щапова, Гринченко, 2017].

Литература

Гринченко С.Н. Метаэволюция (систем неживой, живой и социально-технологической природы). М.: ИПИРАН, 2007. 456 с.

Гринченко С.Н. Эволюция темпов жизни людей и развитие человечества // Человек, 2014, № 5, С. 28–36.

Гринченко С.Н., Щапова Ю.Л. История Человечества: модели периодизации // Вестник РАН. 2010. № 12. С. 1076–1084.

Гринченко С.Н., Щапова Ю.Л. Пространство и время в археологии. Часть 3. О метрике базисной пространственной структуры Человечества в археологическую эпоху // Пространство и время. 2014. № 1. С. 78–89.

Гринченко С.Н., Щапова Ю.Л. Мультидисциплинарная глобальная археология как отрасль теоретического знания // Пространство и время. 2016. № 3-4 (25-26). С. 104–113.

Жирмунский А.В., Кузьмин В.И. Критические уровни в процессах развития биологических систем. М.: Наука, 1982. 179 с.

Щапова Ю.Л. Хронология и периодизации древнейшей истории как числовая последовательность (ряд Фибоначчи) // Информационный бюллетень Ассоциации «История и компьютер», № 25, март 2000.

Щапова Ю.Л. Материальное производство в археологическую эпоху. СПб.: Алетейя, 2011. 244 с.

Щапова Ю.Л., Гринченко С.Н. Введение в теорию археологической эпохи: числовое моделирование и логарифмические шкалы пространственно-временных координат. М.: Историч. факультет Моск. Ун-та, Фед. исслед. центр «Информатика и управление» РАН, 2017. 236 с.

Grinchenko S.N. Meta-evolution of Nature System – The Framework of History // Social Evolution & History. 2006. V. 5 (No. 1). Pp. 42–88.

Grinchenko S.N. The Pre- and Post-History of Humankind: What is it? In: Problems of Contemporary World Futurology. Newcastle-upon-Tyne: Cambridge Scholars Publishing, 2011, Pp. 341–353.

Grinchenko S.N., Shchapova Y.L. Human History Periodization Models // Herald of the Russian Academy of Sciences, 2010, V. 80, No. 6, Pp. 498–506.

Grinchenko S.N., Shchapova Y.L. Archaeological Epoch as the Succession of Generations of Evolutive Subject-Carrier Archaeological Sub-Epoch. Philosophy of Nature in Cross-Cultural Dimensions. The Result of the International Symposium at the University of Vienna / Komparative Philosophie und Interdisziplinäre Bildung (KoPhil), Band 5. Hamburg: Verlag Dr. Kovač. 2017. Pp. 478–499.

О ТЕОРИИ ЛЕСА

Алексей Григорьевич ШОЛОХОВ[1]

ON FOREST THEORY

Alexey G. SHOLOKHOV

В докладе осуществляется попытка систематизировать авторские многолетние исследования в форме комплексной «теории леса» и, в этом подходе – провести аналогию между жизнью леса как экологической системы (биоценозом), где главной жизненной формой являются деревья – и жизнью (социальными отношениями) между людьми, объединенными в конкретном социально-историческом развитии данного общества (в докладе изучается общественная история России на протяжении последнего столетия). Особое внимание уделяется циклическим закономерностям (универсального характера) в осуществлении биологических и общественных процессов.

Для достижения заявленной цели автором используется математическое моделирование, в том числе и в отношении роста леса, включая здесь вопросы конкуренции разных пород деревьев. Отдельное внимание фокусируется на вопросах текущего разрушения экологической ниши человечества.

В целом, в планируемом выступлении – автор рассчитывает представить на рассмотрение коллег элементы своей развиваемой комплексной и циклической «теории леса», которая, в завершенной форме, как можно надеяться – сможет выступить в качестве ценного инструмента для более глубокого познания (и понимания) кризисных явлений, включая экологические проблемы современности (и обнаружении эффективных способов выхода из них) в ходе современного социально-исторического развития.

Ключевые слова: лес как модель общества, политические кризисы, рост леса – модель истории, циклические закономерности истории, экологические проблемы современности.

[1] Независимый исследователь, г. Сочи.

ЭКОЛОГИЯ НА XXI ВЕК: НОВЫЙ РАУНД ОБСУЖДЕНИЯ ИЛИ НОВЫЙ МЕТОДОЛОГИЧЕСКИЙ ПОДХОД?

Алексей Семёнович КОЖЕМЯКОВ[1]

ECOLOGY FOR THE 21ST CENTURY: A NEW ROUND OF DISCUSSION, OR A NEW METHODOLOGICAL APPROACH?

Alexey S. KOZHEMYAKOV

1. Экология XX и XXI веков – перечень принципиальных различий в представлениях наук о природе и обществе. Почему «антропосфера» сменила «биосферу» в качестве главного природного фактора? «Видимые и явные признаки» болезни (атмосфера и климат, снижение природной способности к само-восстановлению).

2. От «покорения природы» XIX и XX века, как преимущественно «технической проблемы», к «планетарному экологическому вызову» XIX века (согласно недавнему отчету WWF «индекс живой планеты» показывает, что в период с 1970 по 2014 год планета лишилась 60% видов, при этом четыре года назад этот показатель составлял 52%). Тревожную (если не сказать – безнадежную) картину даёт и последний доклад Римского Клуба 2017г. (см. статью К.С. Хруцкого в Biocosmology- neo-Aristotelism).

3. Причины парадоксальной непропорциональности «вызовов» (согласно последнему отчету WWF, «индекс живой планеты» показывает, что в период с 1970 по 2014 год планета лишилась 60% видов, при этом четыре года назад этот показатель составлял 52%) и «ответов» в сфере экологии и природосбережения на национальном и международном уровнях (КПД усилий по экологии стран ОЭСР – 10%). Существующие паллиативы и неприемлемые (пока) универсальные средства не решают, а лишь накапливают груз проблем.

4. Почему в XX веке не сформировалась как общепризнанное понятие «ноосфера» В.И. Вернадского? «Накопление опыта прошлого», как одно из главных свойств «живого вещества». «Имманентный дуализм» западной (доминирующей в мире) научной парадигмы включает онтологический (потребность) и гносеологический (осознание) компоненты, а поскольку последний ограничен в своих возможностях (оставаясь в рамках дуализма), «интересы» довлеют над «последствиями», происходят «сбои в рациональности». Как результат: «какология» ак. Г.А.Заварзина, как «антипод ноосферы» – это не «плохая экология», а нарушение гармонии в диаде человек-природа, и в каждом из составляющих в этой диаде.

5. Мнимые (некая «особая русская духовность») и реальные особенности русского мировидения («особенности построенного на языке сознания»)

[1] Научно-исследовательский институт Человеческого общества, г. Санкт-Петербург.

можно резюмировать следующим образом: «спонтанная междисциплинарность» (французский профессор Мариз Денн) и «стремление к опережающему отражению действительности» (академик П.К.Анохин). Подтверждающий пример из опыта современной России: «необходимость изменения базиса цивилизации и преодоления сегодняшнего глобального кризиса через создание принципиально нового природоподобного технологического уклада, и новой техносферы» (М.В.Ковальчук). В основе этих особенностей сознания – предрасположенность к триадичности сознания (при сохранении главной общественной проблемы – остающейся непроявленности этой особенности в массовом сознании).

6. В свете сказанного выше, восходящие к аристотелевской традиции идеи «органицизма», «интегрализма» и «тринитаризма» не случайно находят сегодня в России столь солидный научный отклик. Очевидно, что с использованием этого подхода неизбежно появление и нового взгляда на т.н. «экологические проблемы» – из разряда «текущих технологических трудностей» они будут поставлены на должный уровень «проблем сохранения и преобразования Человечества».

7. В сложившихся обстоятельствах важным структурообразующим моментом для российского и мирового мировоззрения людей являются концепты «Человек сознательный» и «Гуманитарное (единое человеческое) общество», разрабатываемые группой петербургских авторов – участников данной конференции. Опираясь на «третью сигнальную систему», «Человек сознательный» руководствуется не только настоящим, но в ещё большей степени «причиной из будущего», переходит от «планирования» к «управлению» будущим. Касательно отношений внутри общества и мировой политики, такие представления станут решительным разрывом с архаичным «дуализмом» прошлого (исходящим прежде всего из деления на «свой-чужой» и пресловутых «национальных интересов»).

   Разумеется, в представлениях Человека сознательного кардинально изменятся и представления о том, как восстановить утерянную гармонию человека и природы (в данной статье «экология» призвана главным образом подчеркнуть очевидную тупиковость «развития» происходящего на наших глазах).

   Человечество находится перед лицом проблем, которые невозможно решить прежними подходами и взглядами на Человека (отсюда – неизбежность становления «Человека сознательного»). Экология – это проблема Человека, а не Природы.

8. Отдельным аспектам развития «Гуманитарного (человеческого, по-русски) общества» посвящены три последующих доклада руководителей «Института человеческого общества» (Санкт-Петербург). Важно подчеркнуть в заключение, что это лишь отдельные грани работы, ведущейся уже несколько десятилетий.

МЕХАНИКА НАБЛЮДАТЕЛЯ В ТЕНЗОРНОЙ ФОРМЕ
(к математизации научной модели Человек Сознательный)

Андрей Михайлович АНИСИМОВ[1]

TENSOR'S INTERPRETATION OF THE MECHANICS OF OBSERVER – (Towards the mathematical interpretation of the concept "Homo Conscious")

Andrei M. ANISIMOV

Одним из подходов универсального представления взаимного отношения величин и взаимодействия наблюдаемых объектов[2], и первичной математизации данных отношений для научных дисциплин, служит их тензорная[3] форма[4].

Используя общий вид зависимости *воздействие-отклик* (например: Г.Г.Зегря, В.И.Перель, 2009, – для физических законов[5]):

$$B=DA$$

описываемой тензорами и принимающей координатный вид[6], рассмотрим данный подход[7] в применении к *механике* и *теории Наблюдателя* (2018[8]), которые составляют обоснование[9] научной модели: *Человек Сознательный*[10].

Формирование научной модели *Человек Сознательный* сопровождается расширением представлений о сигнальных системах Человека, – и существующего

---

[1] Научно-исследовательский институт Человеческого общества, г. Санкт-Петербург.

[2] А также явлений, процессов.

[3] Тензор (нем.) *от лат. tendere направляться, стремиться, склоняться*. Мат. Величина особого рода, задаваемая числами и законами их преобразования и являющаяся развитием и обобщением вектора и матрицы. *Толковый словарь иностранных слов*. Л.П.Крысина. М. Русский язык. 1998.

[4] См. *Тензорная форма физических законов* (С.23), в Г.Г.Зегря, В.И.Перель. Основы физики полупроводников. М. Физматлит. 2009. С.336.

[5] «Целый ряд физических законов может быть записан в виде зависимости некоторой величины B – отклика – от другой величины A – воздействия. Если воздействие мало, то эта зависимость линейная (первый член ряда Тейлора) и может быть записана в символическом виде: $B=DA$. Величина D является свойством кристалла и внешних параметров, но не зависит от воздействия», *Г.Г.Зегря, В.И.Перель,* 2009.

[6] «воздействие и отклик описываются тензорами и общая линейная связь между ними может быть представлена в координатном виде», (Зегря, Перель, 2009).

[7] «Можно показать, что для того, чтобы две формулы (1.7) и (1.8) описывали одну и туже зависимость отклика от воздействия необходимо и достаточно, чтобы свойство $D_{\beta 1,\beta 2,\ldots,\beta m,\alpha 1,\alpha 2,\ldots,\alpha n}$ преобразовывалось бы при преобразованиях координат как компоненты тензор ранга n + m, то есть как произведение координат», Г.Г.Зегря, В.И.Перель, 2009.

[8] Там же.

[9] Вместе с *теорией институтов* и *теорией сознательности* (Градов, Анисимов, Горбатых, 2018).

[10] Давитая (1993, *теория управления событиями*), Давитая, Градов, Логвинов (1997, в т.ч. в рамках формулирования *синтетической логики* и *науки Синтетики*, 1995-1997), Давитая, Градов, Кожемяков, Статут, и др. (2000), Анисимов и др. (2002), Давитая (2002, 2015), Градов, Анисимов (2015), Ольховая, Руденко и др. (2002-2006, 2015), Анисимов (2017), и др.

представления для научной модели Человек Разумный (Homo Sapiens), как – о 1-ой и 2-ой сигнальных системах, и сформулированного для модели Человек Сознательный подхода, как – о 1-ой, 2-ой, 3-ей, 4-ой сигнальных системах[11]. Выдвинутое[12] положение *о 1-ой-4-ой СС* связано с постановкой задачи на установление полноты и определенности *направления(-ий)* действия общих величин модели – причин[13] жизни, действия и деятельности Человека, взаимодействия Человека с Человеком, с Природой (окружающим Миром), и с другими Людьми (Человечеством), тем самым также удовлетворяя условиям тензорной формы представления отношений величин.

Три группы причин[14], с полнотой и определенностью их действия (на Наблюдателя) *по направлениям*[15], – *из* прошлого, *в* настоящем, *из* будущего, образуют координатную систему для (отображения) пространства состояний *живого*[16] Наблюдателя (Человека).

Для действия Наблюдателя также существуют внепричинные (за горизонтом состояния[17]), беспричинные (за горизонтом управления[18]), и внешнепричинные (за горизонтом наблюдения) характеристики событий.

Направление, и другие характеристики, сигнального воздействия, сигнального отклика, и сигнальных свойств (организма) Человека, и внешних к нему свойств – окружающего мира, для размерности (порядка[19]) модели *Человек Сознательный*,

---

[11] Давитая (1997, 2002, 2015), Анисимов и др. (2002), Градов, Анисимов (2015), Руденко и др. (2002-2006, 2015), Анисимов (2017[1], 2017[2]).

[12] нами для модели Человек Сознательный: Давитая, 2002, 2015, Анисимов и др., 2002, Ольховая и др., 2002-2006, 2015, Анисимов, Градов, 2015, Анисимов, 2017 (2).

[13] Логвинов, Давитая, Градов (1997), Давитая (2002, 2015), Анисимов и др., (2002), Руденко и др. (2002-2006, 2015), Анисимов (2017 [2]).

[14] Первая группа – причина(ы) в прошлом, вторая группа – причина(ы) в настоящем, третья группа – причина(ы) в будущем.

Давитая, (2002, 2015): зазоры между прошлым, настоящим, будущим, и - прошлым временем, настоящим временем, будущим временем, – это состояния Наблюдателя.

[15] Логвинов, Давитая, Градов, 1997, в работах: *Наука Синтетика*, *Общая теория безопасности*, *Человек Сознательный*.

[16] Аксиомы *наблюдателей* (Давитая, 1997, 2015), аксиомы *живого* Наблюдателя (Давитая, 2002, 2015).

[17] Ольховая, Руденко, Шестерикова (2002-2006, 2015), Анисимов, Градов (2015), Анисимов (2017 [2]).

[18] Там же.

[19] **Наблюдатель – Человек** (личность, личный субъект): (порядок, размерность модели), – *Человек Сознательный* (топология модели: 1-ая, 2-ая, 3-я, 4-ая сигнальные системы, в качестве инвариантов).

Порядок, расширяющий данный порядок, данную размерность модели обозначается нами как: **Наблюдатель – Человечество** (*коллективный субъект*, по Градову, проявляемый сознательно – в том числе после набора популяционной численности = 10^{10} Человек ныне живущего Человечества (обозначенной нами как *число Капицы*, [Анисимов, Градов, 2015]): этот порядок, размерность модели обозначается как, – *Человеческое Общество* (топология модели, – 10-ти инвариантная: 1-ая – 4-ая СС – *Человек Сознательный* [Давитая, 2002, 2015, Ольховая и др., 2002-2006, 2015], 5-ая, 6-ая, 7-ая, 8-ая, 9-ая, 10-ая СС – *Человеческое Общество*). [1-ая – 10-ая сигнальные системы: См. Анисимов, Градов, 2015, Анисимов, 2017 [2]]

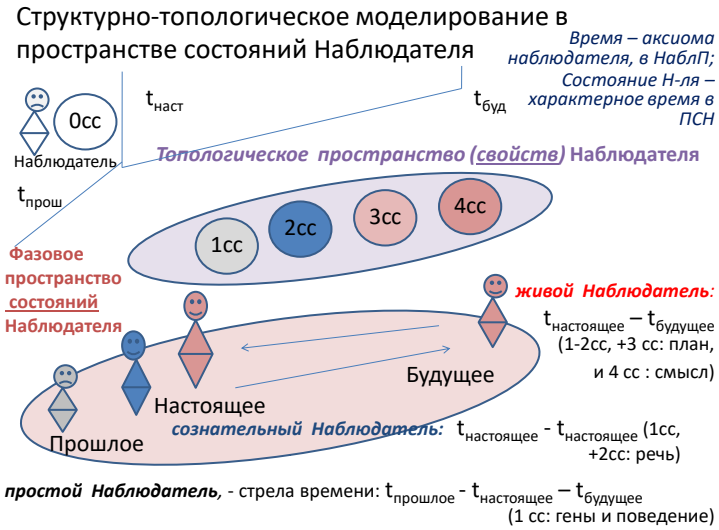
служат предметом исследования перспективной научной дисциплины *о высшей сигнальной деятельности*[20] Человека.

«*В теории управления событиями пространство начинается с наблюдателя*», (Давитая, 2002, 2015).

«*Система координат также задается Наблюдателем, с центром в точке его нахождения. И от нее*[21] *начинается отсчет времени и отсчет всех остальных координат наблюдаемого объекта*», (Градов, Анисимов, Горбатых, 2018).

(Анисимов, 2017 [2]): Тогда, топологическое представление *о Наблюдателе*, сформулируем как:

- *Наблюдатель* – (рассматривается) как объект наблюдения и описания его свойств;
- Вводится определение неизменности (инвариантности) свойств Наблюдателя при непрерывной деформации (деятельности);
- Определяется количество сигнальных систем – как инвариантов топологического Наблюдателя, и его характеристика в связи с этим (*характер* действия *Наблюдателя* – определяется *от Q* активированных *сигнальных систем*);
- Определяется пространство состояний (фазовое) Наблюдателя, такое что: *состояния Наблюдателя* (проявление свойств от количества активированных сигнальных систем) – рассматриваются *как топологически защищенные.*
- Начала *теории формообразования* разрабатывались одновременно с наукой аксиометрикой (Давитая, 2002, 2015, с.193): *форма является объектом в пространстве управления событиями. Понятно, что в пространстве управления событиями объект представляется полнее, чем в тех, с которыми мы имеем дело в обычной механике*.



Источник: Анисимов, 2017

[20] См. *Анисимов А.М., «Теория Наблюдателя и научно-образовательная модель Человек Сознательный: законы сохранения и пространство состояний Наблюдателя»*, Доклад, в Сб.: «Круглый стол: Законы сохранения в Природе и Обществе», СПб, СИНЭЛ, 2017, С.168.

[21] Для этого в науке *Синтетике* и *Теории управления событиями* (Логвинов, Давитая, Градов, 1997), *событие* определено как – *синтетическая точка в пространстве управления событиями*.

Отсюда, согласно теоретической разработке *механики Наблюдателя* (2018), следует и рассмотрение её в тензорной форме.

Механики Наблюдателя в тензорной форме

«*Осуществляя вращение вокруг осей, проходящих через точку своего размещения:*

- в горизонтальной плоскости (справа налево и слева направо, вокруг оси, проходящей через тело Наблюдателя в направлении «Голова» – «Стопы»),

- в вертикальной плоскости (вперед и назад, относительно оси вращения, проходящей через центр масс[22] *внутри тела Наблюдателя),*

Наблюдатель, таким образом, создает вокруг себя сегмент «Поля Наблюдателя»[23] *в форме шара*[24]*. Само собой, разнообразные комбинированные вращения по спиралеобразным траекториям в этом положении Наблюдателя не только возможны, но и осуществимы, добавляя этому сегменту «Поля Наблюдателя» новых характеристик*»[25].

Получается *со-* и *взаимо*направленная [наблюдение, наблюдению][26] *свойственная*[27] сборка взаимодействия (A_0), – *сумма* (и\или произведение) *импульсов\потенциалов* [по\от] *1-4 сигнальных систем*[28], и *воздействие*[29] (***A***) Наблюдателя и на Наблюдателя в сфере$_1$ Наблюдателя (в *Поле Наблюдателя*, в *сегменте Поля Наблюдателя в форме шара*)[30], формируя, собственно, Поле Наблюдателя – как отклик (***B***). При этом, (***D***) – [собственное множество] свойство Наблюдателя: {*1-ая-4-аяСС*}, и (множество) внешних параметров: (*прошлое, настоящее, будущее*)[31]. *B=DA*.

Итого:

---

[22] В данном случае центр масс совпадает с центром тяжести.

[23] *«Поле Наблюдателя»* – термин Теории Наблюдателя, определение термина изложено в соответствующей статье НИИ ЧО (готовиться к публикации). *«Поле Наблюдателя»* неотделимо от тела Наблюдателя, это продолжение самого тела Наблюдателя, но меньшей плотности, чем собственно тело Наблюдателя. Можно констатировать, что за счет формирования «*Поля Наблюдателя»* происходит увеличение размеров (относительно самого себя первоначального) тела Наблюдателя, путем уменьшения его плотности.

[24] Сформированный таким образом шаровой сегмент *«Поля Наблюдателя»* далее всегда сопровождает Наблюдателя в его дальнейших действиях. При этом позволяя Наблюдателю не только действовать вместе с шаровым сегментом *«Поля Наблюдателя»*, но и внутри этого шарового сегмента *«Поля Наблюдателя»*, причем как одновременно, так и не одновременно. Действия Наблюдателя внутри этого шарового сегмента *«Поля Наблюдателя»* приводят к его увеличению *«Поля Наблюдателя»* (относительно самого себя до таких действий) и изменению его геометрии.

[25] Градов, Анисимов, Горбатых, 2018, С.106-107.

[26] С четырёх сторон, - направлений, в порядке отображения 4-ёх мерной причинности, см. выше *Таблицу.1*.

[27] Свойство Наблюдателя излучать данные типы сигналов [наблюдения], и принимать, поглощать данные типы сигналов [наблюдения] – как внешних параметров.

[28] Согласно модели *Человек Сознательный*.

[29] Действия Наблюдателя: *наблюдение, видение, вращение* (движение). Вращение Наблюдателя и вращение объектов [наблюдения, наименования, управления] в Поле Наблюдателя – *разнонаправленные*, согласно *механики Наблюдателя*.

[30] Такое, что: $A = A_0 * A$.

[31] как … *границы самого наблюдения…*, по Давитая, 2002, 2015.

- *пробудившийся Наблюдатель*[32]: сборка взаимодействия (A_0), - *сумма* (и\или произведение) *импульсов\потенциалов*[33] [по\от] *1-4 сигнальных систем*[34]

- воздействие (A) Наблюдателя и на Наблюдателя в сфере$_1$ Наблюдателя – *наблюдение и обозревание Наблюдателя*[35],

- отклик (B) – *Поле Наблюдателя* (сфера$_1$),

- свойства Наблюдателя (дискретно по *1-4СС*), и внешних параметров (*прошлое, настоящее, будущее*) – (D) [или, *передаточная функция* (Голицин, 2014)].

Схема: Механика Наблюдателя в тензорной форме

При *описании тензорами, линейная связь между воздействием и откликом представима в координатном виде*, по (Зегря, Перель, 2009):

$$B_{\beta 1,\beta 2,\ldots,\beta m} = \sum_{\alpha 1,\alpha 2,\ldots,\alpha n} D_{\beta 1,\beta 2,\ldots,\beta m,\alpha 1,\alpha 2,\ldots,\alpha n} \; A_{\alpha 1,\alpha 2,\ldots,\alpha n}$$

---

[32] Градов, Анисимов, Горбатых, 2018, С.105.

[33] Содержащихся, передаваемых, получаемых

[34] Согласно модели *Человек Сознательный*.

[35] Теория и механика Наблюдателя создается в интересах, в т.ч., объединения (в теории) *наблюдаемого* и *наблюдателя.* Представленное, $A = A_0 * A$, верно для *пространства управления событиями* (ПУС), x^3, t^3, p^3, (по Давитая, 1997, 2002) и *пространства состояний Наблюдателя*.

При этом, для *наблюдаемого*, согласно *пространства Бартини* (Бартини, 1966), x^3, t^3, – «Рассмотрим некоторый предикативно неограниченный и, следовательно, уникальный экземпляр А. Установление тождества экземпляра А с самим собою $A \equiv A$, $A * 1/A = 1$, можно рассматривать как отображение, приводящее образы А в соответствие с прообразом А. Экземпляр А, по определению, может быть сопоставлен только с самим собою, поэтому отображение является внутренним и согласно теореме Стоилова может быть представлено в виде суперпозиции топологического и последующего аналитического отображения».

И, *при изменении системы координат*, что в общем случае для рассматриваемой нами механики означает – смену состояния Наблюдателя, - зависимость записывается (по Зегря, Перель, 2009) как:

$$B'_{\beta 1,\beta 2,\ldots,\beta m} = \sum_{\alpha 1,\alpha 2,\ldots,\alpha n} D'_{\beta 1,\beta 2,\ldots,\beta m,\alpha 1,\alpha 2,\ldots,\alpha n} A'_{\alpha 1,\alpha 2,\ldots,\alpha n}$$

Общее и полное представление в механике Наблюдателя

К рассмотренному выше представлению *механики Наблюдателя* (*2018*), в простой *тензорной форме*, добавим общее представление *механики Наблюдателя* (2018), чему соответствует отображение процесса *раскрытия* (расширения) *Поля Наблюдателя*: от (*сегмента Поля Наблюдателя в форме шара*) *сферы*$_1$ *Наблюдателя, сформированной им при наблюдении*, к тору$_1$ и тору$_2$ (*механика Наблюдателя*, 2018, С.101), и образуемым сфере$_2$ и сфере$_3$ при множественном, соответствующем этим торам, – *торении*[36], расширяющегося *Поля Наблюдателя*.

Тогда, отклик (***B***) есть:

- отклик 1 порядка (B): сфера$_{(1)}$ (*Поле Наблюдателя*), согласно вышеприведенной *схемы: Механика Наблюдателя в* простой *тензорной форме*,

- отклик 2 порядка (B_I): тор$_1$ (и сфера$_2$) – раскрытие (расширение) Поля Наблюдателя, согласно нижеприведенной *схемы: Раскрытие Поля Наблюдателя* (Механика Наблюдателя, 2018), и

- отклик 3 порядка (B_{II}): тор$_2$ (и сфера$_3$) – раскрытие Поля Наблюдателя, согласно нижеприведенной *схемы: Раскрытие Поля Наблюдателя* (Механика Наблюдателя, 2018), такой, что:

$$\boldsymbol{B_{общий} = B + B_I + B_{II}}$$

A^2 (для B_I) – фактически соответствует тому, что С.П.Капица обозначил в *популяционной динамике* (вслед за Форестером, 1960, и Хорнером, 1975, но качественно развив и преобразовав) как: «*Наконец, обратимся к росту, происходящему пропорционально квадрату численности* N^2*, который приводит к гиперболическому графику роста и для которого также нет характерного времени роста. … Таким образом, анализ гиперболического роста человечества, связывающий численность и рост человечества с его развитием, позволил предложить кооперативный механизм развития, когда мерой развития является квадрат численности населения мира*»[37]. То есть, A^2 – коллективное действие Людей, по С.П.Капице.

Тогда, допустимо представить, что в указанной формуле (*общей форме*) аналитического разложения отклика ($B_{общий}$), *Поля Наблюдателя*, *A* – воздействие

---

[36] «Совершая вращения вокруг условных крайних точек своего тела с одновременным ортогональным смещением самих этих точек вращения по окружности, образованной на границе первоначально созданной шаровой области *«Поля Наблюдателя»*, Наблюдатель как бы заново прорисовывает сегмент за сегментом эту первоначальную шаровую область *«Поля Наблюдателя»* и обрисовывает вокруг неё дополнительную шаровую область, перпендикулярную её оси и другую дополнительную область параллельно её оси. Таким образом, для взгляда со стороны это выглядит как вращение шара вокруг некой шаровой области. В результате чего начинают формироваться *каналы вращения* шаров в форме торов, происходить, так называемое, «торение» путей Наблюдателя в пространстве *«Поля Наблюдателя»*. Градов, Анисимов, Горбатых, 2018, С. 109.

[37] *С.П. Капица*. Очерк теории роста человечества. М. URSS. 2008, 2014. С. 32, 34-35.

Наблюдателя, которому в наблюдаемом пространстве соответствует действие Человека (индивидуальный, личный субъект, *Человек Сознательный*), A^2 – воздействие Наблюдателя, которому в наблюдаемом пространстве соответствует *коллективное действие* Людей на планете Земля, A^3 *(для* B_{II}*)* – воздействие Наблюдателя, которому в наблюдаемом пространстве соответствует действие Человечества (*коллективный субъект*) в масштабе Вселенной – *общее действие*. То самое, которое трудами Николая Федорова[38] получило название, – *общее дело*.

Допустимо сказать, что A, в формуле $B_{общий}$, – характеризует рост познания, A^2 – рост численности, A^3 – рост сознания[39] Человека и Человечества как *Наблюдателя* в процессе *наблюдения*.

Тем самым, достигается полнота представления механики Наблюдателя: «Далее, совершая вращения обоих торов[40], друг относительно друга вдоль всей наружной окружности в обоих направлениях (вперед и назад) Наблюдателем формируется окончательная геометрия *«Поля Наблюдателя»* из двух совмещенных шарообразных областей, образованных на основе двух ортогональных торов», (Градов, Анисимов, Горбатых, 2018, с. 111).

Следует отметить, что представлена первая версия *раскрытия*, в которой в общем виде реализована логика раскрытия: *пространство состояний Наблюдателя*, *вращение* (движение) *Наблюдателя*, действие (*пробуждение*) *Наблюдателя*, *Поле Наблюдателя* (сфера$_1$, тор$_1$, сфера$_2$, тор$_2$, сфера$_3$, *сфера$_4$*), *коллективное действие*, *общее действие* (дело), *полнота действия Наблюдателя*. К представленной версии *раскрытия* могут и должны последовать уточнения.

Литература

1. Аллахвердов В.М. Сознательно ошибиться – один из способов. // *Человек дела*, №2, 2018, С. 54–59.
2. Анисимов А.М. Теория Наблюдателя и научно-образовательная модель Человек Сознательный: законы сохранения и пространство состояний Наблюдателя. Доклад. // Сб.: «Круглый стол: Законы сохранения в Природе и Обществе». СПб. СИНЭЛ. 2017. С.168. (Анисимов, 2017 [2]).
3. Анисимов А.М. Нейрофизическое динамическое моделирование и (фазовое) пространство состояний Наблюдателя: Человек Сознательный. Доклад на семинаре в ФТИ им. А.Ф.Иоффе РАН, Санкт-Петербург, 10.03.17. (Анисимов, 2017 [1]).
4. Бартини Р.О. Соотношения между физическими величинами. // Проблемы теории гравитации и элементарных частиц, Москва, Атомиздат, 1966. С. 249–266.

[38] Н.Ф. Фёдоров [Гагарин] (1829-1903), русский мыслитель, деятель библиотековедения.

[39] См. рост познания, рост численности, рост сознания Человека и Человечества в *Анисимов, Градов*. Итоги роста Человечества и задачи Человека Сознательного. *2015*. СПб. С. 172.

[40] Следует пояснить, что никаких самостоятельных вращений областей *«Поля Наблюдателя»* в форме торов, относительно друг друга быть не может. А может быть только вращение самого Наблюдателя, образующего все новые и новые области *«Поля Наблюдателя»* в форме торов. Эти вращения совершаются, пока Наблюдатель не завершит полный оборот вокруг сформированной им первоначальной шаровой области *«Поля Наблюдателя»* в обоих направлениях (влево и вправо), как по направлению формирования «первого тора», так и по направлению формирования «второго тора».

5.Бехтерева Н.П. (2000) МОЗГ ЧЕЛОВЕКА. Сверхвозможности и запреты. // Доклад на Конгрессе «Итоги тысячелетия». СПб. 23.11.2000.
6.Голицын Г.С. Статистика и динамика природных процессов и явлений. М. URSS. 2014. С.398.
7.Голицын Г.С. Законы случайных блужданий А.Н.Колмогорова 1934 года. // *Метеорология и гидрология*. 2018. №3. С.5–15.
8.Голицын Г.С. От земных гармоник до гармонии Вселенной. // *Наука и жизнь*. № 2. 2018. С. 8–13.
9.Градов С.Ю., Анисимов А.М., Горбатых О.С. Научно-образовательная модель Человек Сознательный. Теория институтов, теория Наблюдателя, теория сознательности. СПб. СИНЭЛ. 2018. С. 146.
10.Зегря Г.Г., Перель В.И. Основы физики полупроводников. М. Физматлит. 2009. С. 336.
11.Капица С.П. Очерк теории роста человечества. М. URSS. 2008, 2014. С. 123.
12.Капица С.П. Парадоксы роста. Законы глобального развития человечества. М.: АНФ. 2012. С. 204.
13.Кутинов Ю.Г., Чистова З.Б., Беляев В.В., Неверов Н.А. Покомпонентные модели тектонических узлов. Доклад. 02.02.2018, https://regnum.ru/news/innovatio/2428428.html
14.Манифест Гуманитарного Общества // Федеральная газета. Специальный выпуск. 2000. № 13-14. С. 2-3. Авторский коллектив: Давитая С.Ж., Кожемяков А.С., Градов С.Ю., и др.
15.Ожован М.И., Лощинин М.Б. Эвристичные парадоксы теоретической демографии С. П. Капицы. http://present5.com/slajd-1-evristichnye-paradoksy-teoreticheskoj-demografii-s-p/
16.Толковый словарь иностранных слов. Л.П.Крысина. М. Русский язык. 1998.
17.*Foerster, H. von, P. Mora, and L. Amiot* Doomsday: Friday, 13 November, A.D. 2026. At this date human population will approach infinity if it grows as it has grown in the last two millennia // *Science*. — 1960. — № 132. – С. 1291–1295.

ТЕОРИЯ ИНСТИТУТОВ. СТРУКТУРНАЯ СХЕМА ИЕРАРХИИ ИНСТИТУТОВ

Сергей Юрьевич ГРАДОВ[1]

THEORY OF INSTITUTIONS. STRUCTURAL DIAGRAM OF THE HIERARCHY OF INSTITUTIONS.

Sergey Ju. GRADOV

Предпосылки создания Теории институтов2

1. *Пресса*

Поток публикаций с восклицаниями: Институты – то, Институты – сё, как важны Институты, изменим Институты, создадим Институты, «правильные» Институты и будет всем хорошо.

2. *Отсутствие понимания и смысла*

При всем богатстве текстов, как в количестве, так и в объеме, нет объяснений не только «правильности» Институтов (за исключением – сделаем все в точности как на Западе, а не получится, значит люди наши виноваты, не те они достались инноваторам от общественного переустройства), но и того что же это такое Институты.

3. *Огромное количество сугубо прикладных институтов, прекрасно (или не очень) работающих в своих узко специализированных областях.*

Пример: фондовый рынок, прекрасно выполняющий задачи его организаторов по организации спекулятивных торгов различными финансовыми инструментами, как будто бы предназначенными для финансирования реальных секторов экономики, но в действительности являющимися предметами для торга, по большей части.

Отсутствие внятного ответа – почему вообще теме Институтов придается такое большое значение при обсуждении общественного устройства и общественных отношений.

4. *Недостаточность и неточность экономической теории в части институтов.*

Постулаты Теории институтов

Институт – система взаимозависимых, взаимосвязанных ролей, определяющих образец поведения людей, принимающих на себя эти роли, во взаимоотношениях между людьми при взаимодействии.

Общественные отношения – это система институтов, существующая в конкретный исторический период в конкретном обществе.

---

[1] Автономная некоммерческая организация «Научно-исследовательский институт Человеческого Общества»; г. Санкт-Петербург.

[2] Полный тест «Теории институтов» представлен в книге «Научно-образовательная модель Человек Сознательный. Теория институтов, Теория Наблюдателя, Теория сознательности» С.Ю. Градов, А.М.Анисимов, О.С.Горбатых, Санкт-Петербург, 2018г., СИНЭЛ, ISBN 978-5-6041112-3-9.

Роль – ограниченный институтом конечный ансамбль действий человека в отношении других людей в процессе их взаимодействия в рамках данного института.

Роль обозначена именем существительным, определяющим суть и смысл действий человека, принявшего эту роль для исполнения в рамках данного института. Перенос роли в другой институт порождает дополнительные действия человека исполняющего такую роль, ранее не предусмотренные таким институтом и сдвоенное наименование роли человека в этом другом институте (пример отцы-командиры). Перенос роли возможен из институтов высшего порядка в институты низшего порядка, но не наоборот.

Создавая тот или иной Институт люди, таким образом, самим себе отвечают на вопрос: Как действовать по отношению другу к другу? Как осуществлять взаимодействие раз уж у них сложилось то или иное сообщество?

Созданный в результате Институт и является ответом на указанные вопросы в той узкоспециализированной области взаимодействия людей, которую этот Институт и олицетворяет.

Образование людьми сообщества с одной стороны порождает потребность в упорядоченном взаимодействии, т.е. в наличии Института, а с другой стороны, чтобы образовать устойчивое сообщество людям становиться нужным, упорядочить взаимоотношения, т.е. создать Институт.

Структура институтов, согласно Теории институтов

Основа структуры: порядки, уровни, ячейки.

Институты I-го порядка

Описываются словами. Определяют взаимоотношения и порядок взаимодействия родственников. Составляю основу Человеческого общества. Неизменяемы, но уничтожаемы.

Институты I-го порядка созданы вне общественных структур. Являются основанием и необходимым условием для создания институтов II-го порядка (примеры: *семья, вера*).

Институты II-го порядка

Описываются абстрактными терминами. Определяют взаимоотношения и порядок взаимодействия в сообществе людей, в рамках общих для этого сообщества действий. Созданы как производная от соответствующего института I-го порядка. Подразделяются и включают в себя уровни, существующие параллельно друг другу в рамках одного и того же института II-го порядка. Являются основанием и необходимым условием для создания институтов III-го порядка. Изменяемы и уничтожаемы (примеры: *свадьба, религия*)

Институты III-го порядка

Описываются конкретными, строго определяемыми терминами. Определяют взаимоотношения и порядок взаимодействия в конкретном обществе и по конкретным обстоятельствам взаимодействия между членами этого общества. Созданы как производная от институтов II-го порядка. Подразделяются и включают в себя уровни, существующие параллельно друг другу в рамках одного и того же института III-го порядка и ячейки, существующие параллельно друг другу в рамках одного и того же уровня. Являются основными исполнительными механизмами взаимодействия в обществе. Изменяемы и уничтожаемы (примеры: *брак, церковь*).

Структура распределения институтов по порядкам, уровням, ячейкам представлены в таблицах 1, 2, 3. Общая структурная схема иерархии институтов по «Теории институтов» представлена в таблице 4.

Таблица 1.

Структура распределения порядков

Порядок:	**I**	**II**	**III**
Описание:	семья	свадьба	брак
	вера	религия	церковь

Таблица 2

Структура распределения уровней

I	**II**		
вера	религия		атеизм
	уровень	христианство	…
		ислам	
		буддизм	
		иудаизм	…
		…	

Для некоторых Институтов II-го порядка характерно наличие нескольких уровней реализации одного и того же института, отражающих распределение многообразия форм институтов, существующих в том или ином обществе, в тот или иной исторический период.

Таблица 3

Структура распределения ячеек

Порядок – II		**Уровень – Христианство**	
Порядок – III		Уровень – церковь	Уровень – секта
III	*ячейка*	католичество	
		православие	
		протестантство	пятидесятники
			баптисты
			…

Для Институтов III-го порядка характерно наличие не только уровней, но еще и ячеек внутри одного и того же уровня, отражающих процесс дифференциации институтов в связи со всё большей и большей их специализаций и узостью их применимости, с одновременным увеличением детализации, описываемых ими процессов взаимодействия.

Таблица 4

Общая структурная схема иерархии институтов:

<table>
<tr><th>I</th><th colspan="6">семья</th><th colspan="7">вера</th><th colspan="4">…</th></tr>
<tr><td rowspan="3">II</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="3"></td><td colspan="4"></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="3"></td><td colspan="4"></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td><td colspan="3"></td><td colspan="4"></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="6">III</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Семья – это семья, а не сообщество или общество. Несколько семей составляют сообщество, несколько сообществ – общество.

Структурная схема не симметрична. Разбиение на уровни и ячейки, может быть каким угодно разреженным или плотным. Плотность может, как увеличиваться, так и уменьшаться. Таким образом, количество Институтов под тем или иным институтом I-го порядка определяется потребностями общества в конкретный исторический период своего развития. Развитие при этом может быть направлено, как на увеличение институтов, так и на их уменьшения в соответствии с целями и задачами конкретного общества в конкретный момент своей истории.

Литература

«Научно-образовательная модель Человек Сознательный. Теория институтов, Теория Наблюдателя, Теория сознательности» С.Ю. Градов, А.М.Анисимов, О.С.Горбатых, Санкт-Петербург, 2018г., СИНЭЛ, ISBN 978-5-6041112-3-9.

ТЕОРИЯ СОЗНАТЕЛЬНОСТИ В РАЗВИТИИ СОВРЕМЕННОГО ОБРАЗОВАНИЯ

Олег Сергеевич ГОРБАТЫХ[1]

THE THEORY OF CONSCIOUSNESS AND THE DEVELOPMENT OF MODERN EDUCATION

Oleg S. GORBATYKH

В интересах раскрытия предмета настоящего доклада, следует четко определить и разграничить понятия - «**сознание**» и «**сознательность**».

«Сознательность – свойство[2] человека, приобретаемое в процессе воспитания и образования как непосредственно его самого, так и всех предшествующих поколений его предков. Свойство одновременно и наследуемое человеком, и приобретаемое им самим. При этом, когда мы говорим о наследовании свойства *сознательности*, то мы понимаем под процессом его наследования не какие-либо биологические особенности организма человека, передаваемые по наследству, а наблюдаемые и усваиваемые им навыки сознательного поведения на примере действий и повседневного поведения его родителей, других родственников и сколь угодно далёких от него многих и многих поколений предков человека, сформировавшие семейные и родовые традиции, нормы и правила поведения этих людей при взаимодействии друг с другом и с другими людьми. По меткому замечанию Анисимова А.М.: «Свойство *сознательности* проявляет человека как Человека, формирует человека Человеком Сознательным и Общество Человеческим»[3].

«Сознание – процесс в организме живого[4], представляющий собой ансамбль (совокупность) взаимосвязанных и взаимозависимых действий, осуществляемых и людьми, и живыми организмами»[5].

---

[1] Научно-исследовательский институт Человеческого общества, г. Санкт-Петербург.

[2] В данном случае под свойством понимается качественная характеристика человека, одновременно объединяющая его с другими людьми, обозначающая близость их взаимоотношений при взаимодействии, даже в отсутствии родственности и одновременно же отличающая его от других живых организмов.

[3] С.Ю. Градов, А.М. Анисимов, О.С. Горбатых. *Научно-образовательная модель Человек Сознательный.*
Теория институтов, Теория Наблюдателя, Теория сознательности. СПб, СИНЭЛ. 2018.

[4] Здесь мы используем прилагательное *«живой»*, несмотря на то, что прекрасно знаем о том, что научные представления о живом и скажем представления о живом некоторых религиозных учений, верований или доктрин отличаются, и порой значительно. При этом нам также известно, что распространенное толкование прилагательного «живой» в общем смысле обозначает того, в ком есть жизнь, который живёт. А вот уже с точностью толкования слова «жизнь» есть вопросы и о точности, и о строгости, так почитаемой учеными и не выполняемой в этом случае. Не говоря уже о том, что только определений этого слова более сотни. Одного только перечисления качеств живого отличающих его от неживого, не достаточно для определения *«жизни»*. Всегда найдутся исключения, выпадающие из общего ряда качеств и, тем не менее, принадлежащих живым. Например, мулы – без сомнения живые, но при этом бесплодны, т.е. неспособны к самовоспроизведению себе подобных пусть и с изменениями. А ведь именно это качество – самовоспроизведение, признается научным

«**Сознание** присуще всему живому, а **сознательность** только человеку. Поэтому некорректно ставить вопрос есть *сознание* у кого-то/чего-то или нет. Так как это процесс, то он или протекает (совершается), или не протекает (не совершается), т.е. процесс этот имеет начало и завершение, может быть закончен и начат снова. И нет никакой необходимости искать *сознание* у животных, микробов, растений, доказывать его наличие или опровергать такие доказательства. Животные, растения, микробы – живые и все процессы живых организмов в них и у них протекают, в том числе и *сознание*. Даже камень у дороги, поскольку он живой[6] (часть живой природы планеты Земля), то какие-то действия он совершает, какие-то процессы происходят и с ним, и у него, точно также и *сознание* переживается этим камнем. Что это за действия? Камень лежит (сам совершает это действие); камень мокнет под дождем; мёрзнет в мороз; нагревается в жару; двигается вместе с почвой, на которой лежит; отбрасывает тень и т.д., и т.п.»[7].

«**Сознательность** и **ответственность,** наряду с рядом других свойств Человека, описывают Человека в Обществе, его поведенческие характеристики по отношению к людям, а не характеристики его организма. Как уже было отмечено выше, это не наследственные признаки организма, передаваемые через деторождение, а свойства, приобретаемые детьми от наблюдения за поведением родителей и других предков. Наследуемые традиции поведения. Это как раз формируемые свойства, но формируемое постоянно, поколениями людей на протяжении всей их жизни. При этом, чтобы обрести *сознательность* и проявлять *ответственность,* также необходимы усилия самого человека. Некоторые индивидуумы, даже имея примеры сознательного поведения своих родителей, все равно не приемлют сознательность и

сообществом за обязательное качество, одно из основных качеств, отличающих жизнь от нежизни. В энциклопедическом словаре Брокгауза и Ефрона (том XIA (22), стр.948) приводится такое определение жизни: *«Жизнь, в философском смысле, - такой способ существования, в котором множественность частей и различие форм данного целого связываются целесообразно известным единством, находящимся в самом этом целом, а не полагаемым извне. ... Сущность жизни требует непременно, чтобы и единство частей, и целесообразность движений имели внутреннее основание в самом живущем, так что внешние воздействия могут только возбуждать жизнь или способствовать её проявлению, но не создавать её. Жизнь трудно поддается какому-либо категорическому определению, несмотря на многочисленные попытки, сделанные в этом направлении представителями, как школы анимистов, так и материалистов. Анимисты большею частью стремились вникнуть в сущность жизни и вдавались в метафизические соображения, имевшие мало общего с биологическими основами жизни. С другой стороны, материалисты, в своих попытках свести жизнь на простую механическую игру атомов живого тела, своим стремлением к упрощению доводили дело до смешного, до вопиющего противоречия с реальными явлениями жизни».* Напомню, что большинство ученых материалисты.

[5] С.Ю. Градов, А.М. Анисимов, О.С. Горбатых. *Научно-образовательная модель Человек Сознательный.*
Теория институтов, Теория Наблюдателя, Теория сознательности. СПб, СИНЭЛ. 2018.

[6] Здесь мы сознательно берем крайний (даже кого-то шокирующий) случай, определяя камень живым, несмотря на то, что об этом могут подумать представители научного сообщества. И делаем это, чтобы показать отличие термина «*сознание»*, как процесса в живом, от термина «*сознательность»*, как свойства человека. Взяв в качестве примера животное или растение, мы бы продемонстрировали то же самое терминологическое отличие процесса от свойства.

[7] С.Ю. Градов, А.М. Анисимов, О.С. Горбатых. *Научно-образовательная модель Человек Сознательный.*
Теория институтов, Теория Наблюдателя, Теория сознательности. СПб, СИНЭЛ. 2018.

поступают бессознательно. Этим высказыванием подчеркивается, что *сознательность* есть у каждого человека на Земле, так как передана ему от многих и многих поколений его предков, простирающихся далеко в его прошлое, вплоть до самой первой семьи общего предка гаплогруппы[8] этого человека, кем бы она ни была и от какого бы временного периода её появления на планете не велся бы учеными-генетиками отсчет представителям такой гаплогруппы, но не каждый «активировал» (включил, сделал действующим) в себе *сознательность* и пользуется ею»[9].

Раскрытие указанных положений *теории сознательности* в интересах формирования перспективной образовательной модели и образовательного стандарта удовлетворяют потребности научного и просветительского развития представлений о Человеке – как ***Человеке Сознательном***[10].

«Количественное накопление данных о возможностях и запретах мозга, о двуединстве – по крайней мере, многих – если не всех его механизмов, сейчас на грани перехода в качество – получения возможности целенаправленного формирования человека Сознательного. Однако, переход от познания закономерностей природы к разумному пользованию ими не всегда быстрый, не всегда легкий и всегда – тернистый.

И все же, если подумать об альтернативах – жизни в ожидании кнопки ядерного чемодана, экологической катастрофы, глобального терроризма – понимаешь, что как- бы не был труден путь, он – наилучший – путь формирования человека Сознательного, общества и сообществ людей Сознательных. На основе знания принципов и механизмов работы мозга, его возможностей и сверхвозможностей, механизмов защиты и пределов, двуединства многих механизмов нашего богатейшего мозга»[11].

Целью реализации Российской Федерацией образовательного стандарта – **Человек Сознательный,** является воспитание и образование Человека в условиях наступающей новой мировой культурной эпохи – **большого Человечества**[12]**.** Воспитание и образование Человека нового типа, которого в рамках государственной идеологии искали при построении СССР. Человек нового типа – это Человек Сознательный, про которого с позиции фундаментальной науки впервые доказательно сказала Академик Российской академии наук - Наталья Петровна Бехтерева. Его открытие явилось результатом преемственности развития русской научной и мировоззренческой школы: Сеченов И.М. – Павлов И.П. – Бехтерев В.М. –

---

[8] Прочитать о том, что такое гаплогруппа можно в Википедии или если этот источник не заслуживает Вашего доверия, то на сайте проекта Генофонд.рф (http://xn--c1acc6aafa1c.xn--p1ai/?question=chto-takoe-gaplogruppa).

[9] С.Ю. Градов, А.М. Анисимов, О.С. Горбатых. *Научно-образовательная модель Человек Сознательный.*

Теория институтов, Теория Наблюдателя, Теория сознательности. СПб, СИНЭЛ. 2018.

[10] Градов, 1997; Давитая, 1996, 2002, 2015; Бехтерева, 2000; Давитая, Градов, Кожемяков и др., 2000; Анисимов и др., 2002; Анисимов, Градов, 2015, Градов, Анисимов, Горбатых, 2018.

[11] Бехтерева Н.П. (2000) МОЗГ ЧЕЛОВЕКА. Сверхвозможности и запреты. Доклад на Конгрессе «Итоги тысячелетия». Таврический дворец. Санкт-Петербург. 23.11.2000.

[12] Исследования под руководством С.П.Капицы:

Капица С.П. (2014) Очерк теории роста человечества. Демографическая революция и информационное общество. 2008. Изд. 2-е. – М.: ЛЕНАНД.

Капица С.П. (2012) Парадоксы роста. Законы глобального развития человечества. М.: АНФ. С. 204.

Бехтерева Н.П. и совпало с переходным этапом от Человечества к Человеческому Обществу.

Задачей перспективного отечественного образовательного стандарта служит – формирование образованного Человека: ***знающего, умеющего*** **и** ***понимающего*** условия, проблемы и смыслы развития и соразвития Общества, Природы, Человека и Человечества. **Содержанием** инноваций перспективного образовательного стандарта РФ является сочетание ***знаниевого, умениевого*** **и** ***метазнаниевого*** (смыслосодержательного) подходов в формировании личности ученика, молодого поколения в целом, а также при продолжении образования в жизни взрослого Человека.

Советский стандарт образования – «знаниевый», воспитывал, обучал и развивал исполнительские навыки и способности у большинства в подрастающем поколении на основе накопленного Человечеством опыта и знаний классического образования и наук Нового времени, оформившихся и развившихся с XVIII в. по 3-ю четверть XX в.

Современный передовой (Великобритания, Китай, Сингапур, и др.) стандарт - «умениевый», призван формировать квалифицированного пользователя, обладающего устойчивыми и многовариантными навыками ориентирования в современных знаниях и других цивилизационных возможностях, которые дает молодому поколению развитая техносфера созданная Человечеством. Поэтому современное образование, с конца XX века, стремится формировать тип – **Человека Разумного Умелого.**

Формула перспективного отечественного образовательного стандарта - воспитание и образование триедино-развитой личности: **Автора, Исполнителя и Пользователя.** *Авторство*, в широком смысле, ключ к *метазнанию* жизни.

Воспитание и обучение личному **Авторству** в принимаемых в жизни решениях, проявляет у учащихся впоследствии свойство ответственности и сознательности своих действий. Определяет меру понимания учащимися, уже с молодого возраста, как возможностей, так и проблематики сосуществования с другими в условиях растущего Человечества и сокращения, в том числе искусственного, с учетом развития техносферы, расстояния между Людьми и странами. Человечество растёт и мир становится более *плотным*.

Культура **Исполнительства** и первичное развитие навыков управления учит работать в коллективе, знакомит с возможностями выбора профессии в условиях развитого разделения труда в современном Обществе и формирует у учащихся основы понимания процессов взаимодействия, как внутри Общества, так и Общества и Природы, регулирования степени воздействия на планету.

Образование, направленное на развитие **Пользовательских** умений, прививает учащимся навыки к последующей профессиональной деятельности и трудовой активности. Данная перспективная отечественная модель образования соответствует естественной (семантической) и исторической, культурогенной мощности русского языка, как языка науки и образования.

Трехзвенный образовательный стандарт: **знания – умения – метазнания** сочетает подходы, направленные на приобретение учащимися навыков и умения учиться (тип действия – **Пользователь**), на проявление ими разумности в выборе знаний среди информационного многообразия (тип действия – **Исполнитель**), формированием у молодого поколения сознательности и ответственности (тип действия – **Автор**), то есть такого действия, которое у каждого Человека, вне зависимости от возраста и образования, всегда самостоятельное. Таков первый сделанный ребенком шаг в жизни, первое прочитанное им слово, и так далее, вплоть до первого научного открытия, и каждого ответственно принимаемого им в жизни решения.

Умелость и разумность образованных личностей и участников Общества, участников общественных отношений, – служат важными качествами *исполнителей* человеческих планов развития (личного, семейного, национального, мирового) и качествами *пользователей* достижений цивилизации, сохраняющими Природу и Планету.

При этом, вне авторства Человека над собственной жизнью, вне осознанной самостоятельности принимаемых Человеком решений – нет также и его способной к сотрудничеству и позитивной соревновательности исполнительности в интересах развития и устойчивого существования Общества. А без собственного воспитанного и образованного действия Человека, и его разумного, исполнительского приложения к разнообразным возможностям, которые предоставляет Общество – нет устойчивости и безопасности использования все возрастающим числом Людей на планете своих умений и реализации ими своих желаний и жизненных устремлений.

Именно поэтому, в условиях растущего *большого* Человечества и стремительно развивающейся техносферы, принципиально важным для национального образовательного стандарта мирового уровня, является сочетать в себе подготовку и обучение на всех трех уровнях естественных состояний действия Человека, как **Автора** своих жизненных устремлений, как **Исполнителя** собственных планов и их развития и как умелого **Пользователя** возможностями, которые накопило Человечество и создала Природа.

Решением задачи реализации перспективного образовательного стандарта – **Человек Сознательный,** является ведение трёх метапредметных взаимосвязанных курсов в среднем и высшем образовании – **Природоведение, Человековедение, Обществоведение,** по отношению к которым традиционные знаниевые дисциплины и развиваемые новые, современные умениевые дисциплины и умениевые форматы знаниевых дисциплин, являются взаимодополняющими (см. внизу):

Стандарт образования	Современный «умениевый»	Советский «знаниевый»	Новый «метазнаниевый»

Основы образовательного стандарта	«Обучение на нескольких языках с упором на английский язык. Кастовое образование компетентной и продуктивной рабочей силы, умеющей адаптироваться к изменению обстоятельств и обученной приобретать новые навыки в течение всего периода активной рабочей деятельности[13]».	Школа единая и общеобразовательная, университетского типа, воспитывает Людей, объединённых общей культурой.	Природоведение – знания о Природе и её законах. Человековедение – знания о Человеке и его законах. Обществоведение – знания об Обществе и его законах.
Приобретаемые навыки	Пользователь	Исполнитель Пользователь	Автор Исполнитель Пользователь
Формируемая образовательным стандартом модель Человека	Человек Разумный Умеющий	Человек Разумный Знающий	Человек Сознательный

Литература

1. Бехтерева Н.П. (2000) МОЗГ ЧЕЛОВЕКА. Сверхвозможности и запреты. // Доклад на Конгрессе «Итоги тысячелетия». СПб. 23.11.2000.
2. Градов С.Ю., Анисимов А.М., Горбатых О.С.. (2018) *Научно-образовательная модель Человек Сознательный. Теория институтов, Теория Наблюдателя, Теория сознательности*. СПб, СИНЭЛ. 2018.
3. Давитая С.Ж. (*Сергеев А.*), *Градов С.*Ю. (1997) Представления о Человеке и человеческом теле в синтетической науке // Научно-информационный вестник «Академия». № 2. – С.6-8.
4. Давитая С.Ж. (*Сергеев А.*), *Градов С.*Ю. (1997) Проблема питания // Научно-информационный вестник «Академия». № 2. – С.10-12.
5. Давитая С.Ж. (2015) Человек Сознательный. СПб.: СИНЭЛ. С. 272.
6. Капица С.П. (2014) Очерк теории роста человечества. Демографическая революция и информационное общество. 2008. Изд. 2-е. – М.: ЛЕНАНД.
7. Капица С.П. (2012) Парадоксы роста. Законы глобального развития человечества. М.: АНФ. С. 204.
8. Манифест Гуманитарного Общества// Федеральная газета. Специальный выпуск. – 2000. - № 13-14. – С. 2-3. Авторский коллектив: Давитая С.Ж., Кожемяков А.С., Градов С.Ю., и др.
9. Людмила Рябиченко – «Производство дешёвой рабочей силы как новая цель российского образования», www.semlot.ru 30.05 2016 г.

[13] Людмила Рябиченко: «Производство дешёвой рабочей силы как новая цель российского образования», URL: www.semlot.ru , 30.05.2016.

CLOSING ADDRESS

Xiaoting LIU[1]

ПОДВЕДЕНИЕ ИТОГОВ

Сяотин ЛЮ

Hello everyone, we have discussed many topics in two days. First of all, I would like to express two points on the issue just debated.

First, discussing such topics today may be based on our division of understanding. In fact, there can be no purely mechanical and purely organic extremes in real life, perhaps showing a situation where it is too strong on the one hand and weak on the other. Therefore, what kind of thinking and values are adhered to will have different effects on the world. I think that there is not only a difference in left and right between the two positions, but also a difference in level. For example, the mathematical and mechanical point of view we are talking about is only the relationship between things, which has its advantages, because it is very efficient to combine the pieces. For example, the abstract person's point of view in the market economy does not need to consider every specific person at all. The assembly line in industrial production is also like this, so we have formed such a working machine. In fact, as a living person, each of us is specific. Just like the people in the room, we are not only different in length, but also different in culture and physique. Therefore, the organic point of view is more specific, and the abstract result is that every concrete thing can't be found. In the final analysis, we don't simply put together like a machine. The world has a living content that is spelled out when it is spelled.

Second, we humans have a problem and like to use one opinion to oppose another. For example, a long time ago, we were all in the original relationship, and then suddenly there was a new relationship. Some people said that the original relationship was not counted. Then what shall we do? In fact, fundamentally speaking, these two viewpoints come from the nature of things and human beings, so we cannot simply replace one with another. And we also saw the consequences of trying to replace another point of view and bring it to the world. Therefore, Biocosmology wants to find a balance between the two. But looking for a balance between the two also has a position and ideological basis, and you can’t find this balance by sticking to the mathematical point of view. We have already seen that the world dominated by machines, capital and power is such a consequence. Therefore, if we are to find a balance, we must base ourselves on Biocosmology. This is somewhat similar to what Marx said. From dialectics, metaphysics can be understood, but

[1] President, the Biocosmological Association; Beijing Normal University, CHINA.

metaphysics cannot understand dialectics. It is in this sense that Biocosmology is more fundamental.

I also want to say that Organicism is not only ancient, but also represents the future direction of mankind. On the one hand, we have seen the changes that the Biocosmology has brought to the world in recent years. As a force to promote the world's organic thinking, the Biocosmology Society has held many conferences around the world, published journals, and interacted with other academic organizations. We also evoked many organic-minded thinkers to participate in activities. Disseminate and popularize organic ideas and make people aware of the importance of such a view to production and life. I always believe that promoting organic thinking is a wake-up and wake-up movement for us, an enlightenment at the same time, it also reminds us in a certain sense that we must constantly recall our memory, because organic thought is not the fiction of man, but it has a very long time history. Like the early Greek mythology, the Middle Ages creation epic, the ancient philosophy of India, and the ancient Chinese legends, there are very rich organic thoughts. How these ideas are expressed in today's familiar words is an important task. In this respect, Prof. Khroutski's work is very meaningful. He wants to explore the organic connotation by analyzing the Russian thoughts of the pre-Orthodox period, because in the final analysis, this is part of the fundamental experience of the Russians.

In fact, in the face of our complex future, any kind of experience is needed, and even if they are put together, it is still not enough. Therefore, our Biocosmology Society has held meetings and activities in many countries, especially countries which is relatively developing and less developed, to awaken their self-experience. Then, through continuous contact, inform scholars from various developing countries to participate in our meeting. We tell them that your experience is not just your own, but it is part of human beings, because all human knowledge is local. We know that globalization has caused many peoples to lose themselves, and we can help them find themselves through such activities. Because we only have one earth, everyone is a community of destiny, no one can be left. Laozi said that "the great wisdom like stupid, the great sound like silence", those weak voices may more truly reflect the voice of the world. We call such a movement a non-Western ideological movement. For example, what we heard at our venue was more of a non-Western voice. Once, many of us saw Western philosophers feel that they were deficit in some way. Of course, we also admit that the professional research of Western scholars has done a good job. I used to be around them for a long time, but I am willing to be here now. Listen, I think here is where that is closer to the truth.

Finally, the promotion of Organicism requires attention to a fundamental difference, that is, the difference between philosophy and science. There may be only one science, but the world may have thousands of philosophies. Each nation may

reach the commanding heights of human wisdom through its own experience and meditation. Science may be lifeless, but philosophy must be vitality, that is, be sentient. The so-called universal connection and the same goal are the characteristics of philosophy. To speak in Chinese is that Science stress on same but philosophy stress on connection. For example, there are Greek philosophy, Russian philosophy, and Chinese philosophy in the world. They are different, but as long as we understand each other, they are connected. Therefore, our gathering today is a gathering of truth. If there is more time in the future, we will have more professional philosophers to participate in dialogues and exchanges, especially we will also do translation work. Today, communication is very important. Connection requires communication, or there will be no connection. Therefore, I sincerely welcome everyone to go to China at any time to carry out extensive exchanges. Be same is very simple, you don't even need to meet. For those who haven't come, just ignore them and assume that they don't exist. It's hard to connect, because you have to find each one, for fear of falling. According to the organic theory, everyone is there. Then you have to communicate with them to discuss, and you can't just say "only my words matter". Therefore, our meeting this time is really a wonderful gathering. It was through the efforts of Professor Konstantin Khroutski that we found each other. I hope that after this meeting, we can keep looking for. The reason is that "we are a family", and can also be expressed in two Chinese poems, called "Long distance separates no bosom friends who is connect by Biocosmology". Therefore, Organicism is like Christian missionary, we need to go around to deliver the gospel (good news).

We are especially grateful to Professor K.Khroutski for his great work. He is really dedicated and capable in his efforts. Such a type is rare among the international societies. I have learned a lot with him in these years, because in the final analysis, Organicism is learning from each other.

Finally, thank you again for your active participation. Thank you for this meeting. We will meet again!

Contributors

Yan BAO : Ph.D., Associate Professor, Liupanshui Vocational Technical Institute, Liupanshui City, CHINA. *Email*: 1175773@qq.com

Hongwei DING : Researcher, Beijing Academy of Whitehead Education Technology, Beijing, CHINA; *Email*: 2362447303@qq.com

Sergey N. GRINCHENKO : Principal scientific researcher of Institute of informatics problems of Federal Research Centre "Informatics and Control" of RAS, Moscow; Doctor of technical sciences, Full professor, Vice-president of the BCA; *Email*: sgrinchenko@ipiran.ru

Kumar KHADKA : Ph.D. student, School of Philosophy, Beijing Normal University; Beijing, CHINA; Kathmandu, NEPAL; *Email*: kumark@qq.com

Walter KOFLER : Dr. hab. med., Professor at the Department of Normal Physiology, I.M. Sechenov First Moscow State Medical University, Moscow, RUSSIA; Univ. Prof. i.R. (Innsbruck), MD, Academician RAS, President of the International Academy of Science – Health & Ecology; Innsbruck, AUSTRIA; *Email*: walter.kofler@ias-he.com

Runhu LI : Ph.D., Assistant Professor, The Institute for the History of Natural Sciences, Chinese Academy of Sciences; Beijing, CHINA; *Email*: lirunhu1987@qq.com

Xiaoting LIU : Ph.D., President, the Biocosmological Association, Professor, College of Philosophy and Sociology, Beijing Normal University, Center for Science and Humanity Studies, Beijing 100875, CHINA; *Email*: liuxiaoting@bnu.edu.cn

Андрей М. АНИСИМОВ : научный сотрудник; НИИ Человеческого Общества, г. Санкт-Петербург; *Email*: stchot_institute@mail.ru

Сергей Ю. ГРАДОВ : Директор автономной некоммерческой организации «Научно-исследовательский институт Человеческого Общества», г. Санкт-Петербург; *Email*: gras-1@mail.ru

Олег С. ГОРБАТЫХ : Научно-исследовательский институт Человеческого общества, Директор по исследованиям, г. Санкт-Петербург; *Email*: inform@niicho.ru

Сергей Н. ГРИНЧЕНКО : Доктор технических наук, профессор, главный научный сотрудник Института проблем информатики Федерального исследовательского центра «Информатика и управление» РАН, Москва, вице-президент БКА; *Email*: sgrinchenko@ipiran.ru

Алексей С. КОЖЕМЯКОВ : Доктор юридических наук; Председатель Ученого Совета НИИ Человеческого Общества, г. Санкт-Петербург; независимый эксперт по вопросам мировой политики, г. Москва; *Email*: akozhemyakov@inbox.ru

Константин С. ХРУЦКИЙ : к.ф.н., Биокосмологическая ассоциации, секретарь; доцент Новгородского государственного университета имени Ярослава Мудрого, Великий Новгород; *Email*: Konstantin.Khrutsky@novsu.ru

Алексей Г. ШОЛОХОВ : Кандидат сельскохозяйственных наук, независимый исследователь, г. Сочи. *Email*: sholok37@gmail.com

Виталий Г. ШОЛОХОВ : Доктор философских наук (к.т.н.); независимый исследователь; Денвер, Колорадо, США. *Email*: sholok37@gmail.com

Юлия Леонидовна ЩАПОВА : Доктор исторических наук, профессор исторического факультета Московского государственного университета имени М.В. Ломоносова, Москва; *Email*: y_schapov@mail.ru

Сборник Тезисов

Международной научно-практической конференции – 12–14 октября 2018 г., приуроченной к 20-летию Новгородского отделения МАНЭБ, и 18 Международному симпозиуму Биокосмологической ассоциации – 18ISBC,
на тему:

«Экология и безопасность человека, общества и природы в эпоху Интегрализма – современные вызовы и методологии по их разрешению: Российские и мировые традиции и практики, новые Биокосмологические (нео-Аристотелевские) перспективы»

***Организаторы*: Новгородский государственный университет имени Ярослава Мудрого (НовГУ); Новгородское отделение Международной академии наук экологии и безопасности жизнедеятельности (НО МАНЭБ); Биокосмологическая ассоциация (БКА)**

(место проведения – Институт сельского хозяйства и природных ресурсов НовГУ,
Великий Новгород, ул. Советской Армии, д. 7)

Review of Georges Chapouthier's,
The Mosaic Theory of Natural Complexity
(*A scientific and philosophical approach*)
1 Éditions des maisons des sciences de l'homme associées, France, 2018.
ISBN 9782821895744

THE INTEGRATED COSMOS

Arthur SANIOTIS[1]

In his recent book, *The Mosaic Theory of Natural Complexity: A Scientific and Philosophical Approach* [2018] the French philosopher/neuroscientist Georges Chapouthier further develops his Mosaic Theory of biological and cultural systems. This is a concise and elegant work, combining the sciences and the social sciences in order to validate Chapouthier's general claim that biological and cosmic systems are governed by similar principles – in this case juxtaposition and integration. Chapouthier has for years been honing his Mosaic Theory to the point that it has been applied in the current work in various areas such as biological systems and structures, and cognition and social behaviors in human and non-human animals.

A major theme underlying this book is 'how can we understand complexity?' Can it be understood in terms of reductionism which is the current paradigm of modern science, or through the lens of evolution? This is a perennial question which many thinkers have attempted to answer. Chapouthier's contribution no less warrants serious analysis as other theories of complexity. However, Chapouthier being both philosopher and scientist elucidates his ideas with sagacity; his insights into biological, cosmic and mind processes not only bespeak his erudition but pique the reader's curiosity throughout the book. I was fascinated by the plethora of examples which Chapouthier uses throughout his book to masterfully unpack his ideas. This is not an easy exercise even for someone as skilled as Chapouthier. Being a non-reductionist, Chapouthier develops his understanding by recognizing Darwinian forces while employing Aristotelian ideas, specifically Aristotle's four causes (Greek: *αἰτία*): (*materialis formalis*, *efficiens*, *finalis*). At the same time, Chapouthier reveals to the reader the apparent immanent principles of his Mosaic Theory. Due to the complexity of Chapouthier's work I will provide a brief critique of each chapter.

In chapter one, Chapouthier provides the theoretical framework of his Mosaic Theory via the medium of ceramic tiles – *tesserae*, which are juxtaposed and integrated in a mosaic which retaining their distinct features. This idea sets up the rest of the discussion into organ development via intron duplication and mutation which leads to creation of new genetic structures. His discussion briefly provides examples of juxtaposition and integration via the inhibitory neurotransmitter (gamma-Aminobutyric acid) molecular (GABA), volvox, and the morphology of vertebrates

[1] University of Adelaide, AUSTRALIA; University of Zurich. SWITZERLAND.

and invertebrates, social construction in animal societies and the human brain invertebrates respectively. What Chapouthier wants to impart to the reader is a way for understanding emergent properties/systems in nature. Complexity arises not only from the processes of juxtaposition and integration of structures (the foundational idea of the Mosaic theory), but how basic structures subsume other structures to create more complex structures, triggering the emergence of new forms and behaviors as an intricate arabesque combining illimitable patterns to create a coherent mosaic pattern – a metapattern in the Batesonian sense [Bateson, 1972]. Indeed, Chapouthier's thesis resembles Bateson's 'ecology of mind' in that a system's components are characterized by symmetry, redundancy and mutuality [Bateson, 2000]. Furthermore, the iterative nature of a system's components is immanent and emergent.

I would like to comment here on the Mosaic Theory's understanding of the relationship between human brain/mind and the universe. Chapouthier rightly concludes that the human brain is a product of biological evolution which is an offshoot of cosmic evolution. Human brain/mind development and maturation comprises Aristotle's four causes, as mentioned earlier. Indeed, human cephalization reflects a somatic blueprint where the brain is located rostrally in human; a design found in invertebrates and invertebrates. This design originated during the Cambrian period (circa 550my). The rostral position of the brain in relation to the body of our Cambrian ancestors was emblematic of increasing complexity in multicellular organisms, and worked concomitantly with nascent sensory organs. The co-evolution of brain and sense organs in the primordial oceans would have greatly enhanced body movement for finding food and predator evasion.

In chapter two, an overview is provided of human cognitive structures and their social manifestations such as language, music, urban planning, ethics and dialectics. Chapouthier posits that these social manifestations of the human mind embody increasing complexity, having originated from less complex forms. What is important is that increasing complexity has the potential to arrive at a new level of organisation such as in the case of robotics which is increasing their cognitive capacities. Here again, Chapouthier makes a case of the ubiquity of juxtaposition and integration between biological structures and human social fields of action. Chapouthier's argument for a mosaic understanding of ethics is particularly revealing. Borrowing from Vanessa Nurock's ethical theory [2012], he argues that ethics incorporates three types of empathic processes: agentive empathy – (subjectifying what another is experiencing), emotional empathy – (simulating another individual's affective states) situational empathy – (understanding the cognitive state of another individual's behavior – theory of mind). The integration of the first two types of empathic processes suffices to produce the foundation of an ethical imagination, while the integration of all empathic types produces a blueprint for human civil consciousness. This is rather predictive as it has to be. Being human is mainly based on imitation and prediction of social others' behaviors. Knowing the intention of others enables the smooth flow of human interactions, thereby maintaining a culture's *modus operandi*.

French thinkers such Claude Levi-Strauss [1962] and Pierre Bourdieu [1977] wrote extensively on this subject. For Bourdieu, an individual's body and behaviors embodies their *habitus* – a collection of traits and characteristics which exemplifies their social position and group affiliation. Individuals enact their *habitus* within social fields which reaffirms to themselves and others their symbolic/social positioning or group affiliation within the social arena. What is important is that the *habitus* is unconsciously enacted, and to some extent shows influences of Levi-Strauss's notion of deep structures within the human mind which unconsciously inform human cognition and behavior [Laughlin, Jr. and Eugene d'Aquili, 1974]. Both Bourdieu and Levi-Strauss endorse the notion of universal structures underlying the human mind which d'Aquili and Laughlin [1979] refer to as the "cognitive imperative" – an autonomic impetus for discovering and adapting to the life-world. The cognitive imperative which has been hypothesized as originating from the left frontal lobe and left orientational areas is geared towards looking for meaning in lifeworld. Chains of events which threaten a psychological breakdown (i.e. unforeseen chance events, luck, fate) are re-formulated into one's reality in order to make sense of otherwise 'ambiguous' phenomena [Guthrie, 2000]. Here the brain/mind is not caught in a cognitive hiatus, but rather musters juxtaposed material from various sensory areas [d'Aquili and Laughlin, 1979]. Thus, the human mind is orientated towards mythmaking. Humans are inventive animals. This coincides with Jackson's "existential imperative" which demands humans to retrieve personal autonomy and *auctoritas* when facing indeterminacy (Jackson, 1998). In both cases, immediate psychological retrieval is necessary, thereby offsetting psychological malaise.

In chapter three, Chapouthier correctly argues that human culture derives from nature. Humans are animals, a fact that is still irreconcilable to many human beings. Indeed, the last two generations of anthropologists such as Jane Goodall [1971], Franz De Waal [1989, 2006], Robert Sapolsky [2004] and others have carefully detailed the cultural lives of primates and non-primate species.

Goodall was the first to reveal that chimpanzees of the Gombe fashioned and used tools. De Waal has posited that non-human animals share empathic behaviors which in humans have formed the basis of our ethical systems. The coordinated hunts and behavior patterns of wolves point to them possessing some degree of self-awareness [Bekoff, 2002]. In addition, the behaviors of Bonobo chimps underline a high degree of emotional intelligence – an imperative element for the theory of mind. Studies from early ethologists echo what Darwin has been saying all the time – that is, humans are different only by degree and not by kind; our species shares continuity with other species. Chapouthier makes a strong case for the afore-mentioned. Indeed, I am glad that he is familiar with De Waal's work on chimpanzees where he shows them possessing proto-morals as seemingly do other species.

This leads to the second major theme of chapter three, which considers culture as a negentropic phenomenon. The argument here is that culture as an artifact of nature, resists the second law of thermodynamics – entropy, due to its penchant towards organisation and orderliness. Human culture is an extension of nature both in its social structure and its desire to exist. Life by its very being embodies a spirit of

rebellion against those entropic forces which would impel it towards non-existence. Humans destroy and then rebuild, houses decay only to be refurbished, knowledge is lost and then retrieved. Where death and oblivion beckon negentropic forces act as a salvation. Culture and nature are bound in a Heracleitian tension between entropy and negentropy – a kaleidoscopic dualism. A universal mosaic is depicted between seemingly opposing forces which are born from the one, creative, a mysterious and immanent impulse which in Hinduism refers to as *Shakti*.

Due to our prolific technology and linguistic abilities humans can amass and store knowledge beyond the biological confines of the cerebrum, giving us a semblance of immortality. The global internet, which exemplifies Teilhard's pan-human *nous* reflects the juxtaposition and integration of hundreds of millions of minds occupying cyberspace. In this cyber realm the human imagination is apparently immune from entropy. The transhumanist Nick Bostrom [2003] has stated that in the future scientists may be able to upload an individual's mind atom by atom. The mind simulation would then be downloaded into a computer before being placed into a robotic body. Thus, death would be bypassed and immortality achieved. The mind simulation would have all of the qualities of being transcendent, unalloyed by the biological limitations of human corporeality. Of course, this idea is festooned with many problems and dilemmas which are beyond the scope of this review. The point here is that it is untenable to categorize human culture as being separate from nature. In the Aristotelian view both are continuity, each represents a different ontic level as Chapouthier insists that are based on biological principles. Negentropy counters entropy in biological and cultural processes; thereby enabling these to not only exist but to thrive.

Chapter four is a discussion of Mosaic theory and Biocosmology which develops from Aristotle's idea that the principles of biological life are also immanent in the cosmos. This idea diverges from Platonic Essentialism and its idea of fixedness in the universe. The biocosmological model as developed by the contemporary philosopher Konstantin Khroutski is based on a triune categorical system. This seemingly goes against science and anthropology which privilege dichotomies. Khroutski [2010] has explained, for example, that biological systems follow a triunity such as the autonomic system which consists of sympathetic, parasympathetic and metasympathetic systems. It is the metasympathetic system which actually coordinates the other two systems. Certain phenomena which can trigger the sympathetic system such as sensory deprivation, pain, strenuous and repetitive body movements (often displayed in religious rites) can spill over into a parasympathetic system (i.e. trance), allowing the participant to experience a transcendental state of being. Moreover, the sympathetic system has been referred to as the *ergotrophic* system (Greek: *ergo* = 'to work') and the *trophotropic* system (Greek: *trophos* = 'to nourish') [Guthrie, 2000; d'Aquilli, 1979]. Both systems stimulate different cortical and subcortical areas to produce their corresponding responses. Importantly here is that the pendular movement between these two systems triggers multiple areas of the brain with increasing arousal and quiescence [Guthrie, 2000]. From this perspective, the interaction between ergotropic and

trophotropic systems often leads to a transcendental state of being, referred to as "*unico mystica*" [Newberg et al, 2002].

The triune aspect has been given special attention in relation to religious phenomena by such thinkers as Arnold van Gennep [1960], Victor Turner [1969, 1974] and Barbara Myerhoff [1974]. Turner states that religious symbols enable a ritual participant to sensuously explore triune cosmic processes of life, death and regeneration through their corporeal being. Turner proposes that during various religious and secular rituals follow a tri-partite structure; separation, limen and re-aggregation. Although Turner had borrowed this model from van Gennep's ideas of the 'ritual body', the former focused on the limen phase which he renamed 'liminality'. During this phase the participant is symbolically maneuvered towards a temporary and inordinate state, or as Turner states "betwixt and between" social categories. For Turner, liminality fosters creative and ludic elements in which the individual can re-formulate new ideas for living in the lifeworld. Liminality modifies consciousness enhancing an individual's connectedness with social others, or with the transcendent other. In this way, liminality correlates with the biological concept of "provocative operation factor" (POF), also called "de-patterning". POF are concepts or insights which are unconventional. Thus, POF challenges the parameters of cultural dogma and other rigid cultural patterns [Samorini 2000].

Chapouthier's book concludes with a small but important caveat against the anthropic principle. Both he and others are critical of anthropocentric ideologies which have overrated humanity's importance in the cosmos. What Chapouthier and I are clearly against is human exceptionalism since it has led to an uncritical belief of human superiority over all other species. In contrast, the Mosaic Theory reaffirms the unity of biological and cosmic processes and that humanity is a part of the web of life.

Overall, Chapouthier's Mosaic Theory is intellectually stimulating without being laborious for the reader. The book continues the Aristotelian tradition which highlights the organicity of life. The Mosaic Theory complements Darwinian evolution while providing new insights into evolutionary mechanisms. Chapouthier's clear language makes his Mosaic Theory accessible to science aficionados and career scientists alike. I complement his scholarship and life-long legacy to science and hope for more works of this caliber from him in the future.

References

Bateson, G. (1972). *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology*. San Francisco/London: Chandler.

Bateson G. (2000). *Mind and Nature: A Necessary Unity*. Cresskill, New Jersey: Hampton Press.

Bekoff M. (2002). Animal reflections. *Nature* 419: 255.

Bostrom N. (2003). Are you living in a computer simulation? *Philosophical Quarterly* 53(211): 243–255.

Bourdieu *P. (1977). Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

d'Aquilli E.G., & Laughlin C.D.Jr. (1979). The neurobiology of myth. In: *The Spectrum of Ritual: A Biogenetic Structural Analysis*. (pp. 152–182). New York: Columbia University Press.

De Waal F. (1989). *Peace Making among Primates*. Cambridge: Harvard University Press.

De Waal F. (2006). *Our Inner Ape: The Best and Worst of Human Nature*. London: Granta Books.

Gennep van A. (1960 [1909]) *The Rites of Passage*. Trans. Vizedom, M.B., and Caffee, G.L. London: Routledge & Kegan Paul.

Goodall J. (1988 [1971]). *In the Shadow of Man*. Revised edition. Boston: Houghton Mifflin Company.

Guthrie C. (2000). *Neurology, Ritual, and Religion: An Initial Exploration Or: "Were you there when they stimulated our amygdalas? Sometimes it causes me to tremble."* Proceedings for the North American Academy of Liturgy pp. 107–124. (Paper given to the Ritual-Language-action Group, NAAL. Tampa, 2000.

Jackson M. (1998). *Minima Ethnographica: Intersubjectivity and the Anthropological Project*. London: The University of Chicago Press.

Khroutski K.S. (2010). All-embracing (triune) medicine of the individual health: a Biocosmological perspective. *Journal of Future Studies* 14(4): 65–84.

Laughlin C.D. Jr., and E. d'Aquili. (1974). *Biogenetic Structuralism.* New York: Columbia University Press.

Laughlin C.D. Jr., E. d'Aquili E., John McManus, J. et al. (1979). *The Spectrum of Ritual: A Biogenetic Structural Analysis*. New York: Columbia University Press.

Levi-Strauss C. (1962). *La Pansé e Sauvage*. Paris: Plon.

Myerhoff B. (1974). *Peyote Hunt: The Sacred Journey of the Huichol Indians*. Ithaca, U.S.A.: Cornell University Press.

Newberg A., d'Aquili E., & Rause V. (2002). *Why God Won't Go Away*. London: Ballantine Books.

Nurock V. (2012). Pourquoi la philosophie morale devra it-elle s'intéresser à l'éthique animale? In F. Burgat & V. Nurock (eds), *Éthique et philosophie de l'environnement*, Paris, Éditions Wild project.

Samorini G. (2000). *Animals and Psychedelics: The Natural World and the Instinct to Alter Consciousness*. Rochester, Vermont: Park Street Press.

Sapolksy R.M. (2004). *Why Zebras Don't Get Ulcers*. 3rd edition. New York: Holt Paperbacks.

Stoller P. (1986). *The Taste of Ethnographic Things: The Senses in Anthropology*. Philadelphia: University of Pennsylvania Press.

Stoller P. (1997). *Sensuous Scholarship*. Philadelphia: University of Pennsylvania Press.

Turner V.W. (1969). *The Ritual Process: Structure and Anti-structure*. Chicago: Aldine.

Turner V.W. (1974). *Dramas, Fields, and Metaphors: Symbolic Action in Human Society*. Ithaca: Cornell University Press.

Contributors/Авторы

Xiaoting LIU : Ph.D., Professor at the School of Philosophy, Beijing Normal University; President of the Biocosmological Association; Beijing, CHINA; *Email:* liuxiaoting@bnu.edu.cn

Rudolf KLIMEK : Dr. hab. med., Professor, President of the World Information University; Krakow, POLAND; *Email*: mmklimek@cyf-kr.edu.pl

Ana BAZAC : Ph.D., Professor, Division of Logic, Methodology and Philosophy of Science, Romanian Committee of History and Philosophy of Science and Technology, Romanian Academy; Bucharest, ROMANIA; *Email*: ana_bazac@hotmail.com

Georges CHAPOUTHIER : Ph.D., Directeur de Recherche Emerite, ICM & IHPST, CNRS, Paris, FRANCE; Email: georges.chapouthier@upmc.fr

Walter KOFLER : Dr. hab. med., Professor at the Department of Normal Physiology, I.M. Sechenov First Moscow State Medical University, Moscow, RUSSIA; Univ. Prof. i.R. (Innsbruck), MD, Academician RAS, President of the International Academy of Science – Health & Ecology; Innsbruck, AUSTRIA; *Email*: walter.kofler@ias-he.com

Dariusz JASICZEK : M.Sc., Mr World Information University by Hermes Management S.A.; Aubonne, SWITZERLAND; *Email*: office@hermesmanagement.com

Marek KLIMEK : Dr. hab. med, M.D., Professor at the Jagiellonian University; Krakow, POLAND; *Email*: mmklimek@mp.pl

Vladimir N. ALALYKIN-IZVEKOV : Candidate of Pedagogical Sciences, Representative and Program Coordinator of the International Society for the Comparative Study of Civilizations (ISCSC – Russia, Europe); Member, ISCSC Board of Directors; Representative of the Pitirim A. Sorokin Foundation; Washington, DC 20024, USA; *Email*: vlad_ai@yahoo.com

(**Владимир Н. АЛАЛЫКИН-ИЗВЕКОВ** : Кандидат педагогических наук, представитель и координатор программ (по России и Европе) Международного общества сравнительного изучения цивилизаций (ISCSC); Член Совета директоров ISCSC; Представитель Фонда Питирима А. Сорокина; Вашингтон, США)

Paulo Nuno MARTINS : Ph.D., Researcher in History of Science at the Interuniversity Center for History of Science and Technology, New University of Lisbon, Campus of Caparica, Building VII, Floor 2, 2829-516 Caparica, PORTUGAL, Email: paulonunom@gmail.com

Runhu LI : Ph.D., Assistant Professor, The Institute for the History of Natural Sciences, Chinese Academy of Sciences; Beijing, CHINA; *Email*: lirunhu1987@qq.com

Arthur SANIOTIS : Ph.D., Biological Anthropology and Comparative Anatomy Research Unit; Adelaide Medical School, University of Adelaide, AUSTRALIA; Institute of Evolutionary Medicine. University of Zurich, SWITZERLAND; *Email*: arthur.saniotis@adelaide.edu.au

NOTES FOR CONTRIBUTORS

• *The publishers, editors and the BCA Board are not legally responsible for any opinions expressed by the contributors which may not necessarily reflect their own. It is the responsibility of the authors to document their text properly by international academic standards. IN SUBMITTING ANY WORK(s), the AUTHOR RELEASES THE JOURNAL AND THE EDITORS AND PUBLISHERS, AND THE ASSOCIATION FROM ANY AND ALL LIABILITY WHATSOEVER, INCLUDING BUT NOT LIMITED TO THE COPYRIGHT INFRINGEMENT.*

• Articles submitted for publication to the journal "Biocosmology – neo-Aristotelism" (Journal) are given serious consideration.

• The positive result of reviewing ("the article deserves publication") means that the submitted article contains new interesting materials and satisfies the aims of BCA development.

• Editors consider for publication in the Journal only original articles which have not been published previously.

• Each article should normally consist of the following elements:

! A title page with title of article, name(s) of author(s) and address (es) where the work was carried out;

! An abstract – up to 15 lines;

! Keywords (no more than 10);

! The text;

! Illustrations (figures, schemes, photographs, tables, graphics);

! The list of references;

! Authors (co-authors') information:

- Full name;
- Academic degree and position;
- Affiliation;
- Postal address, E-mail address, phone and fax numbers (to contact the author if needed).

• When submitting article to the Journal, authors are requested by editors to follow the guidelines (see below):

1. Maximum recommended length of an article (including an illustrative material, tables, and the list of references) is 40.000 signs, including word spaces. In turn, if a paper is prepared for the sections: "Facts. Comments. Notes" and "Scientific life" – then its length must not exceed 9.000 signs; and for the section "Reflections over the new book" – no more than 18.000 signs (including word spaces).

2. The article submitted to the postal address is prepared in two copies.

3. How to prepare an article:

□ *Article is prepared only in Microsoft Word (version 6.0/95 and later);*

□ *Page format is A4;*

□ *Font – Times New Roman, font size – 14; line spacing – unary; indentation – 1,0;*

□ *Footnotes – paginal;*

□ *Tables (figures, graphics, etc.) are fully embedded in the Word document (are positioned in the corresponding place of an article) and supplied as separate files where possible. The list of figures*

(etc.) and the signature to them are supplied separately and are not placed in the main text. However, there must be a reference to the figure in the corresponding place of an article. Tables should be numbered serially and referred to in the text by number (table 1, etc.). Each table should have an explanatory caption placed over a tabular field, and figures – caption signatures.

4. Exclusively the accepted (in the International System of Units) abbreviations and acronyms are permitted to be used – abbreviations of measures, physical, chemical and mathematical symbols and terms, etc. All acronyms and abbreviations should be clearly explained when they first appear in the text, and all units used should be consistent throughout the article

5. References: the alphabetic (Harvard) system is used – the name of the author appears in the text together with a year of the publication, e.g. [Ivanov, 2001] or Ivanov [2001) (as appropriate). Where there are only two authors both names should be given in the text [Ivanov and Pavlov, 2001] or Ivanov and Pavlov [2001]. However, if there are more than two authors only the first name should appear followed by et al, [Ivanov et al, 2001) or Ivanov et al [2001]. If a reference is given to different works by one author or group of authors in the same year they should be differentiated by including a, b, etc, after the date (e.g. 2001a). If you refer to different pages of the same article, the page number may be given in the text (using the two-spot), e.g. [Ivanov, 2001, p. 100]. The reference list at the end of the article should be given in alphabetic order. A complete reference should consist of: name(s) – surname and first name (separated by a comma), date published (in parentheses), title of the article or book (in italics), name of the journal (in italics), volume and number (in parentheses), for books – editors (if any), town of publication and publisher, and finally the page number(s), e.g.: Ivanov, Ivan A. [1979]. New approaches to treatment of diseases. Therapeutic archive, Vol. 5, No 3, pp. 4–10. The name of a journal or book is given in full.

6. Illustrations: the article is supplied by the adequate number of figures (schemes, graphics, and tables). Color illustrations are accepted. Designations in the figures are given in numerals. Figures can be reduced by 1.5-2 times without compromising their quality.

7. Authors are expected to realize the style of their articles in the manner that corresponds to criterion "clear and laconic".

8. In the case of rejection the submitted article, editors send to the author a corresponding notice with the explanation of reasons (for the refusal of publication).

9. Authors are responsible for ensuring the accuracy of the submitted (published) article.